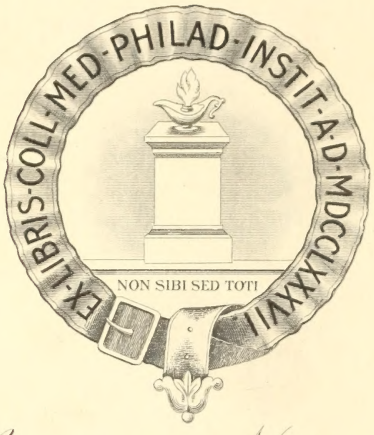
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Current Views on Room Temperature and Ventilation

by

DAVID WILBUR HORN, PH.D., BRYN MAWR, PA.

Lecturer in Hygiene, The Hahnemann Medical College and Hospital of Philadelphia.

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THE fundamental idea in the word "temperature" is well brought out in the familiar line in Sterne's *Sentimental Journey:* "God tempers the wind to the shorn lamb." The idea is one of moderating—moderating the air to the comfort of man. The literal meaning of the Latin *ventus,* wind, is the important thought in the word "ventilation." The idea is that of setting air in motion.[31]

Man had become convinced by experience that it is not well to rebreathe air too much, a good while before the measuring instruments applicable to the problems of temperature and ventilation had been invented. Galileo (1564-1642) devised the thermometer[1]; Danti erected (pendulum) anaemometers about 1570[2]; Muschenbroek (1692-1761) observed that a thermometer with a wet bulb always indicates a lower temperature than one with a dry bulb[3]; and Leslie (1766-1832) introduced the wet and dry bulb hygrometer.[4] These wonderful instruments played no part, practically, in developing man's early conceptions as to rebreathed air. This was the age[9] when gases were for the first time being distinguished from each other and from air, with which all gases had hitherto been confused. How natural then for him to have

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sought the explanation of his difficulties with indoor air, along this chemical line rather than along the line of physical measurements. The fact that he had invented and developed windows shortly after he had roofed his houses[10] may be an expression of his belief that there was something in rebreathed indoor air that ought to be let out, or that unbreathed outdoor air ought to be let in. There can be little doubt from the descriptions of the modes of living of the middle ages, that odors and man's sense of smell played an important role, and dictated to some extent his views on the matter of rebreathed air *versus* fresh air.[11]

With this mediaeval setting, it was logical to search for some gas in open air that was not to be found to the same extent in rebreathed air. Nor could it have caused much surprise when, after the first recognition[5] of the gas later to be called oxygen,[6] another investigator[7] announced that expired air contained considerable amounts of a gas that could be found in the open air only in minute quantities—later called carbon dioxide. As time passed, this substance so characteristic of expired air was shown to cause the death of animals placed in it, and it was shown that air deprived of oxygen also produced the same deadly effects.[8] With man's experiences with rebreathed air, and with these scientific discoveries about air as premises, the syllogism was soon completed: the ill effects of rebreathed air were due to the diminished oxygen or the increased carbon dioxide, or both. And the problem was laid aside as solved, not alone for that day but solved for all time.

But what is logic is not necessarily truth. If it were, decisions at law, for example, would be impossible. Both prosecution and defense would be right, and judges would be wise Solomons who would order the baby cut in half[12] so that it could be distributed to the contestants in proportion to the truth of each one's claim. Neither the diminished oxygen, or the increased carbon dioxide, or the two together as found in the vitiated air of any room, produces the ill effects noted. The experimental proof of these points is beyond all doubt, and it will be presented briefly in the course of this paper.

To unhorse prejudice and put truth in the saddle is one of the most tedious of human accomplishments. For example, Galileo (1564-1642) saw and taught that the Holy

Scriptures were not intended as a text book on science, but the world has been slow to recognize this truth. With respect to vitiated air, the first line of invincible argument against the accepted theory was chemical and physiological. Experiment demonstrated that when the oxygen in air is reduced to the lowest limit found in closed, crowded rooms, the haemoglobin of the arterial blood is still *saturated* with oxygen. As a result of the chemical affinity of haemoglobin for oxygen, the blood cells may still take up practically their full capacity, even when the oxygen is reduced to 12 per cent. Pure air contains about 21 per cent. of oxygen, air from the closest halls, crowded with people, seldom falls below 20 per cent. in oxygen content. It is a fact that nature does not take full advantage herself of this wide limit of 8 per cent. to 9 per cent. of oxygen. Instead she allows man a wide factor of safety, for alveolar air contains only about 16 per cent. of oxygen. In other words, as to oxygen, the air within the lungs is maintained normally at a percentage at least 4 per cent. lower than that of the most vitiated air of any ordinary place, and 4 per cent. higher than is absolutely necessary in order to supply the blood with all the oxygen it needs. Further, neither a deficiency or a surplus of oxygen in the air, unless extreme, has any effect whatever upon the respiratory movements.[13] Therefore, the reduced oxygen content of expired air cannot be the cause of its ill effects.

The increased carbon dioxide content of rebreathed air remains to be considered. The facts here are much as follows: At each breath we take back into the lungs expired air which has come to rest in the nose and larger bronchii—the so-called "dead-space air." This dead space air equals about one-third of a quiet inspiration. The air of the lungs is therefore very impure, and never even remotely approaches pure air in composition. Nature seems especially to have provided that pure air never should enter the air cells of the lungs. This provision is more than a physiological accident. It is useful and necessary. It makes of breathing a continuous process instead of an intermittent one, and so provides a constant supply of oxygen. The nerve center which controls respiration depends for its stimulation on carbon dioxide dissolved in the blood. If the carbon dioxide falls too low, stimulation stops until the proper concentration of carbon dioxide is reaccumulated in the blood; then stimulation takes

place and respiration is restored. This concentration of carbon dioxide in the blood is reached when the amount of carbon dioxide in the alveolar air is about 5 per cent. By reason of the nice adjustment of the reflexes controlling the depth of breathing, the concentration of carbon dioxide in the lungs is thus kept at its normal uniform level regardless of whether we breathe much or little expired air. "The balance is maintained automatically and without our consciousness, and the limits of this automatic regulation of the volume of air inspired goes far beyond the limit of the necessity for change placed upon it by any respiratory contamination[45] that is ever likely to be found in the air of even the most crowded rooms."[14]

As the ground beneath these old chemical theories relating to vitiated air was softening and showing signs of giving way, the time-honored prejudice against odors was brought out and used to shore up the crumbling structure. Odors have in many instances profound psychological effects, of which fear is one. The Chinese sought to win battles by carrying forward enormous censers producing foul odors. "Sewer gas" has been notoriously dangerous. The emanations from swamps have been credited with producing all the ills that have been preceded by the adjective "malarial"—from the Latin, *bad air*. The sure prophylaxis against malaria itself consisted in keeping the windows closed at night. From the point of view of general health some night hours acquired especially bad reputations. Thus Hamlet says:

> "'Tis now the very witching time of night;
> When graveyards yawn, and *hell itself breathes out*
> *Contagion* to this world."

It is a fact of observation that odors[15] usually are noticeable in a closed room when the carbon dioxide content of the air has risen to nearly twice its normal value, that is, to 0.06 per cent.[16]

But science is practical, not sentimental. The Japanese machine guns disillusioned the Chinese warriors who had believed in the martial efficiency of smells. The analysis of "sewer gas" has shown it to be merely atmospheric air carrying a slight excess of carbon dioxide and small quantities of gases from the putrefaction of sewage.[17] This sewer air actually contains fewer bacteria than the air of the streets

above the sewers, and the moist surfaces of sewers and sewage have been proven by the most painstaking experiments to be wholly incapable of imparting germs to the contiguous air, except where bubbles break or spray is otherwise formed.[18] It is a well known, stubborn fact that the workmen employed in all the large systems of sewerage areas are, as a class, unusually healthy and strong, with a high mean age at death and a low death rate.[19] Shutting up the house at night truly prevents malaria, but it does so because the malarial mosquito, which is *nocturnal* in its habits, is thus excluded from the house.[20] The moisture in the vitiated air of rooms when condensed contains notable amounts of the organic impurities previously in the air of the room. This condensed moisture has been injected into normal experimental animals, and even into sensitized animals where the remarkable phenomena of anaphylaxis would enormously aggravate the effect of any protein poison if present—without poisonous effects.[21] It has been thirty-five years since it was first clearly pointed out that if one is strictly cleanly in clothing and person, no odorous substances are given off. And we still self-righteously condemn the ventilation, when we find ourselves in a room of ill-smelling vitiated air.

It remains now to find out a reasonable explanation for the observed effects of a vitiated atmosphere. Before doing so, I wish not to be misunderstood. If very large amounts of oxygen are withdrawn from air, if very large amounts of carbon dioxide are present, if overwhelming or toxic vapors are in the atmosphere, man will certainly suffer. But even in the most crowded rooms, such alterations are never met with under ordinary conditions.[22]

"The proper study of mankind is Man."[23] The direct study of men in enclosed air-spaces, such as air-tight rooms, has given the correct explanation of his discomfort in rebreathed air. Men have been enclosed in air-tight cabinets until the effects of rebreathed air have become unmistakably evident. Men *outside* the cabinet have then begun and continued to breath through tubes the air from within the cabinet—entirely without discomfort and without discoverable ill effects. Then, men within the cabinet have begun and continued to breath through tubes, fresh air from the outside—entirely without discoverable amelioration of their discomfort and distress. Obviously the ill effects of bad air are not due to the

air inside of the lungs, but are due to the air that is outside of the body. Further experiments show an immediate restoration of the confined men to comfort and normality, by modifying the enclosed air of the cabinet in any one of the three following ways: (1) by cooling it, (2) by drying it, (3) by moving it.[24] So that now, well on in the 20th century, we are coming to use intelligently, in room temperature and ventilation the means given us by discovery in mediaeval times; I refer to the thermometer, the hygrometer and the anaemometer.

One of the greatest obstacles to the advance of science has been man's high opinion of himself. Having crowned himself king he has harassed, imprisoned and even murdered those who would approach too near his self-made throne. To the Athenian the earth was flat, and the sun was a god that drove his chariot across the heavens for the good of man as well as for his own amusement, once a day; and the Athenians, after threatening with death, banished Anaxagoras for teaching that the sun was only a ball of fire that might perhaps be as big as Greece.[25] Copernicus' great work (1643), in which he showed that not man's earth but the sun is the *center* of our solar system, was marred in its effect by an anonymous preface someone slipped into it to disarm prejudice, which preface insisted upon the purely hypothetical character of Copernicus' view.[26]

Let us then take a less anthropomorphic view of the animal, man, in his relations to heat and moisture and wind, in order to formulate his problem more clearly. To begin with, the Egyptian mummy is a very dry fellow because he has lost the 58.5 to 65.0 per cent. of water that was in life a part of him. Man is a moist, living mass of colloidal solutions, emulsions and jellies, supported on a small amount of mineral matter. He may be looked upon as similar to a living sponge that in the past withdrew from his native element, the sea,[30] and has since lived immersed and at the bottom of an ocean of more or less moist[29] and more or less quiet air. This moist, spongy organism is constantly losing water by evaporation and by flow; if irremediable drying out is to be prevented water must be constantly poured into it. Any agency that disturbs the balance that ages of habit have established with respect to gain and loss of water, is potentially destructive to this organism, and it therefore reacts to such disturbances.

For example, it is stated "In such a place as Death Valley in summer, with the thermometer at 100° to 135° in the shade, it is almost impossible to drink enough water to preserve normal physiological conditions. * * * People who stay through the summer are in danger of suffering permanent injury to health."[28] The problem of water balance in this organism is accompanied inseparably by a similar problem of heat balance. This organism is constantly losing heat, and must constantly have heat put into it if irremediable damage is to be avoided. Any agency that disturbs the balance that ages of habit has established with respect to gain and loss of heat is potentially destructive to this organism, and it therefore reacts to such disturbances. From the highest air temperatures man experiences in some of the industries, to the lowest met in polar explorations, is about 325°, but if the changes are not too sudden and unexpected, man is usually able to contrive a way to survive. Studies of artificial hibernation produced at will in certain other warm-blooded animals have led to the conclusion that "all the arrangements in the animal economy for the production and loss of heat are themselves fully regulated by the central nervous system, there being a thermogenic center—situated above the spinal cord, and according to some observers, in the optic thalamus."[32] The source of his heat, as of the rest of his energy, is his food, and on a 3,000 calorie diet he turns out, as heat[33] alone, somewhere around enough energy to raise five and a half million pounds one foot vertically against gravity, or in the more usual heat units, about 7,000 British thermal units (B.T.U.'s) in twenty-four hours.[34] Assuming that his body will heat up in just the same ratio as water, unless a 150-pound man is relieved of this heat he will develop within an hour a fever reading about 100.4° F. and in about four hours his temperature would reach 106°.[35] As a man sometimes succeeds in continuing his existence upward of 600,000 hours, that is, for "three score years and ten," he must have ready means of losing heat.

Man loses about 50 per cent. of the water and 3 per cent. of the heat in the urine and faeces; about 10 per cent. of the water and 20 per cent. of the heat by respiration through the lungs; and about 40 per cent. of the water and 77 per cent. of the heat through the skin.[36] It is evident then that in heat loss the skin is a far more important organ than are the lungs

and that in water loss it ranks in importance with the kidneys. It is therefore to be expected that the air outside the body is of more importance than the air inside the lungs, because the air outside the body is the receptacle for all of the water and most of the heat lost through the skin.

The main methods of heat loss through the skin are by convection, radiation and evaporation. The heat loss through the lungs is by evaporation. The heat loss by convection decreases as the temperature of the air increases, falling from an estimated 425 B.T.U. per hour at 56° F. (with 56 per cent. humidity to zero B.T.U. per hour when the air is at blood heat (with 56 per cent. humidity).[37] On the other hand, the heat loss by evaporation increases with increasing air temperature, rising from an estimated value of 50 B.T.U. per hour at 56° F. with 56 per cent. humidity) to 400 B.T.U. per hour when the air is at blood heat (with 56 per cent. humidity).[37] The heat losses by radiation are but slightly known, but are held to decrease with rise of air temperature.

At elevated air temperatures, therefore, it is absolutely necessary for man to be able to evaporate water rapidly from his body into the air. But the capacity of the air at any temperature, for water, depends upon how much water it can still take up at that temperature before it becomes saturated with water. The less water there is already in the air at any temperature, the more water it can take up (at that temperature) and therefore the more heat it can relieve man of *via* evaporation from his body. The more water there is already in the air at any temperature, the less it can take up (at that temperature) and therefore the less is it suited to relieve man of heat by evaporation.[38] If now the temperature of the air is high, since heat loss by convection and radiation has thereby been diminished, it is evident that if the warm air is also moist, the heat loss by evaporation is also diminished—and the discomfort that is the prodrome of heat-stroke appears. Reflex actions through the thermogenic center in the central nervous system now stimulate the flow of blood to the skin, thereby causing an elevation of temperature at its surface and thus facilitating the loss of heat by convection and radiation—to compensate for the reduced loss by evaporation.[39] For example, in the case of weaving mill workers who operate amid the steam blown into the sheds, and whose bodies and clothing are consequently moist, the skin of the face has been

found to be 4° to 13° F. higher in the mill (wet bulb 71° F.) than when at home (wet bulb 55° F.).[40]

Where it is impossible to moderate the temperature or reduce the moisture in the air,[43] a satisfactory remedy is the third one mentioned in the cabinet experiments—namely, to move the air.[42] This does not mean to empty the closed space and fill it with fresh air; it means, to set the air within the closed space in motion. In the cabinet experiments, for example, the surface skin temperature of a man rose 4.3° F. in 13 minutes, due to elevated temperature and moisture-content in the air; but dropped 4.5° F. immediately after a fan, under which he was standing, was started. "At 80° F., with moderate humidity, or 70° to 75° F., with high humidity, almost all persons begin to show depression, headache, dizziness and a tendency to nausea. * * * The subjective symptoms appear when the surface skin temperature reaches a certain height, for example, 93° to 95° F. on the forehead (89.5° to 91.5° in cases of heart disease) and when the relative moisture of the layer of air in contact with the skin increases 20 per cent. to 30 per cent." In all instances where relief was produced by setting the air in motion by the fan, discomfort returned promptly when the fan was stopped. This cycle could apparently be repeated any number of times.[41]

These discoveries have found practical application in many ways. One of the most interesting is to the heating and ventilation of large buildings. The cost of heating large volumes of cold air, and the presence of a low content of moisture, which seems to irritate the mucous membranes, particularly of the nose, are to a large extent obviated today in some buildings by washing and recirculating the air. "Ordinary leakage and the use of a certain percentage of outside air prevent the concentration of any substances not removed by the washer. * * * At the gymnasium of the International Y. M. C. A. College at Springfield, it was estimated that a saving of from 40 to 50 per cent. of coal resulted from recirculating the air."[44]

It is impossible in a paper of this length to go into the results of the studies of the effects of low temperatures and low humidities in any detail; in this part of the field much remains to be done and less agreement is found among the results at hand. One writer states an average temperature of 64° F. is best for the race; with 40 or 50° as a night tem-

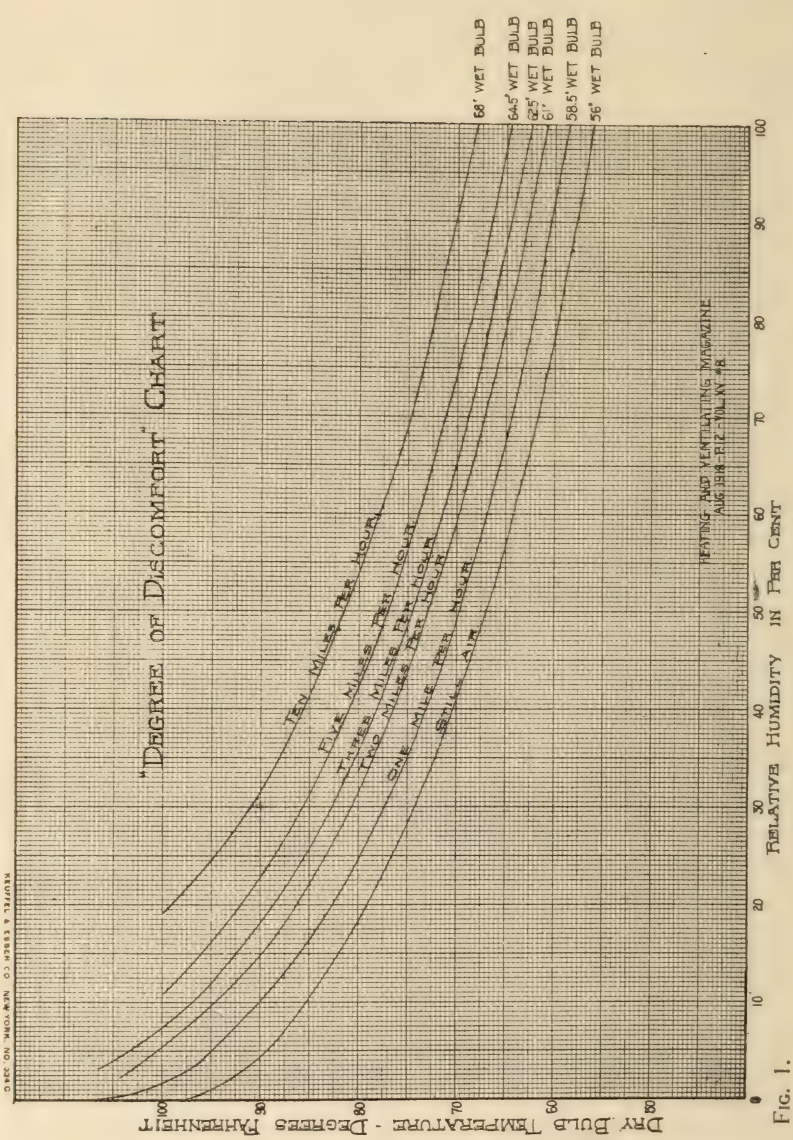

"Degree of Discomfort" Chart
Ten Miles per Hour
Five Miles per Hour
Three Miles per Hour
Two Miles per Hour
One Mile per Hour
Still Air
68° Wet Bulb
64.5° Wet Bulb
62.5° Wet Bulb
61° Wet Bulb
58.5° Wet Bulb
56° Wet Bulb
Heating and Ventilating Magazine
Aug 1918-212 Vol. XV-18
Dry Bulb Temperature - Degrees Fahrenheit
Relative Humidity in Per Cent
Kruffel & Esser Co. New York, No. 2340

Fig. 1.

perature; with 60° at breakfast, rising to 70° by noon and falling to 64° by evening and 60° again by bed-time. These indoor conditions are only satisfactory, however, if the winter air be humidified. Moist air is more healthful than dry air, he states, provided it is not too warm. Such air feels warmer than dry air at the same temperature. Variations of temperature, he maintains, are much more healthful than a uniform temperature.[46]

The last step logically in the progress of our knowledge of temperature and ventilation, would seem to be to establish standards.[47] Any such project is full of difficulties because of the great variations shown naturally by the human animal and because of his marked ability to develop tolerances and to acclimate himself. The same difficulties, however, beset the use of medicines, yet you all agree upon certain dosages of each medicine to be used in advance of knowledge of the variations shown by the particular patient or his tolerances. A very interesting and important contribution[48] in this matter, which embodies years of experimenting, is at hand and I shall speak of it in closing.

The experiments reduce themselves to placing persons in a room, the atmosphere of which may be altered at will, and at suitable times inquiring as to their comfort or discomfort. The room equipment permits of any velocity of movement up to 2800 feet per second, any temperature from 28° to 94°, and any relative humidity from 18 per cent. to 100 per cent. The results of these experiments, combined with earlier experiments in school rooms where the number of subjects was larger but the number of possible variations smaller, have been combined into a graphic chart—Figure I. It is a study of "Degrees of Discomfort" of the average person (in Chicago).

Any movement of the air increases the rate of evaporation from the skin, and moves air heated by convection from the skin away from the skin, thus bringing cooler air (at all temperatures below skin temperature) to the skin. The investigation has shown that under certain velocities of air movement, at a given temperature, a person will be most comfortable when the wet bulb shows a certain reading, as follows:

VELOCITY OF AIR, IN MILES PER HOUR	WET BULB READING
0	56.0
1	58.5
2	61.0
3	62.5
4	63.5
5	64.5
6	65.5
7	66.0
8	66.5
9	67.0
10	68.0

Since the relative humidity is gotten from the wet bulb reading at any (dry bulb) temperature, it is possible to determine from these figures for any temperature and rate of air motion just what the proper humidity for comfort should be. In the graph, the thermometer (dry bulb) readings are plotted vertically and the relative humidity percentages are plotted horizontally. Each curve gives all temperatures and relative humidities that combined produce the comfortable wet-bulb reading, at each of the several velocities of air movement stated on the diagram at the end of each curve. The curves for still air and for air at 1, 2, 3, 5 and 10 miles per hour are given.

Thus, to apply these curves to an example: In order to find the proper temperature for comfort, with 90° F. and 60 per cent. relative humidity, follow the 60 per cent. line up until it intersects the still air line and then read at the left of the table the proper temperature for comfort. This proves to be only 65°. Since the actual air temperature was 90°, the degrees of discomfort equal 25°. If, however, a two-mile breeze had been blowing, then 70° would have been the comfortable temperature, or the degrees of discomfort would only have been 15°. This shows how a gentle breeze may render the hot day more endurable.

It remains to speak briefly of the experimental determinations. The velocity of the wind outdoors is best taken from the weather bureau records. Indoors a sensitive anaemometer, properly calibrated, is used if the air is not still. An easy way to calibrate it is by the aid of the automobile

and speedometer, on a calm day. The relative humidity can not be taken from the weather bureau reports, since their readings are made only at eight in the morning and evening—the hours when the humidity is frequently highest. The relative humidity may be determined quite accurately with the sling psychrometer, and accurately enough, perhaps, for most purposes by the ordinary wet and dry bulb thermometer outfit, *provided* an electric fan is set to drive the air of the room across the bulbs of the thermometers. If you wish to determine the comfort of your patients, this would seem now to be possible with at least as fair a degree of approximation as you can determine the proper doses of medicine for them. Undoubtedly comfort is the ideal condition for the would-be convalescent. He must be at less disadvantage when fighting only against disease, than when contending simultaneously against disease and discomfort from faulty temperature and ventilation.

This standardization of temperature and ventilation by Hill is pioneer work. What modifications future experimentation, under broader conditions as to acclimatization, for example, and individual variation, both in health and disease, may impose upon it, are unknown. Whatever these modifications when determined may prove to be, it is not likely that Hill's conclusions for the average man under ordinary conditions will be found far amiss.

A most careful and detailed investigation has been in progress since June, 1913, under the direction of the New York State Commission on Ventilation, the results of which, as thus far announced, should be carefully examined by anyone interested in this subject.[49] The Commission includes a physiologist, a psychologist, an engineer, a physician, a chemist, and a sanitarian. While the Commission has as yet produced no generalization of such sweeping magnitude as that of E. V. Hill's offered above, it has produced a great deal of valuable and interesting detail backed up by the most painstaking and carefully planned experimentation. It has sought to understand the ill effects of faulty temperature and ventilation, rather than to standardize these matters. Many have looked toward it confidently for the final answer to many vexing problems in this field. In the various papers emanating from it you will find what is thus far known of the physical effects of an improper atmosphere.

[1] Cajori, History of Physics, New York, 1906, p. 90.

[2] *Ibid.*, p. 47.

[3] Nicholson's Journ. Nat. Phil. III, p. 461.

[4] Cf. Note 3.

[5] John Mayow (1645-1679), a practising physician, was led by his experiments to conclude that atmospheric air contained a substance (also present in saltpetre) that sustained respiration and converted venous into arterial blood. Mayow termed this substance *spiritus igno-aereus* or *nitro-aereus*. See Von Meyer, History of Chemistry, Tr., by McGowan, New York, 1898, p. 107.

[6] Scheele, an apothecary, prepared oxygen as early as 1771, calling it at first *aer vitriolicus*, and later "fire air" and also "life air." Priestley isolated oxygen first in August, 1774, calling it "dephlogisticated air." Priestley announced his discovery and published his results before Scheele's were published, and has often been credited with the first discovery of oxygen. See Von Meyer, loc. cit., p. 131. Lavoisier (1743-1794) gave to this gas the name oxygen, and first worked out clearly the oxygen theory of respiration. See Von Meyer, loc. cit., p. 160 and ff.

[7] Hales (1677-1761), physiologist and chemist. Hales' observations of the evil effect of vitiated air caused him to devise a "ventilator" (a modified organ bellows) by which fresh air could be conveyed into prisons, hospitals, ship-holds, etc. See Enc. Britannica, 11 Ed., Vol. XII, p. 835. Also, cf., Higby on "The Safe Limit of Carbon Dioxide in the Working Atmosphere," Amer. Journ. Pub. Health, VIII, p. 477, 1918, where Hales' work is given its proper place in the development of this subject.

[8] Priestley's experiments. Cf. Higby, loc. cit., in foot-note 7.

[9] Before Van Helmont's time (1577-1644) the most various gases were looked upon as not differing materially from ordinary air. It was he who first called them by the generic name "gas." Von Meyer, loc. cit., p. 78.

[10] See a paper on "Windows," E. V. Hill. Trans. Amer. Soc., Heating and Ventilating Engineers, XXIII, p. 193 and ff., 1917. The houses of the Cliff-dwellers, in our Southwest, had windows, and these may be the oldest houses known. Recent archæological investigation does not, however, seem to warrant this view as to their antiquity.

[11] This view is evidenced in Casca's description of the attempted coronation of Cæsar: "And still as he refused it, the rabblement shouted, and clapped their hands, and threw up their sweaty night-caps, and uttered such a deal of stinking breath because Cæsar refused the crown, that it almost choked Cæsar; for he swooned, and fell down at it. And, for mine own part, I durst not laugh, for fear of opening my lips and receiving the bad air." Julius Cæsar, Act I, Scene 12.

[12] I Kings, Chap. 3, v. 16-28.

[13] Oxygen in inhaled air may be made to vary from 50 per cent. to 17 per cent. without apparent alteration in vital functions. When the oxygen content falls as low as 11 per cent. to 12 per cent., the atmosphere becomes dangerous. At 7.2 per cent. death results. The oxygen in fresh

air amounts to about 20.9 per cent.; the oxygen in the closest crowded halls seldom falls below 20 per cent.; therefore the lowest per cent. of oxygen yet observed, even in the most crowded halls, lies well within the limits (5-17 per cent.) within which oxygen may vary without apparent alteration in vital functions. See Rosenau, Preventive Medicine and Hygiene, 3rd Ed., New York, 1917, pp. 663 and 664. For a more extensive discussion, and for references to the original experiments, see Hammerstein-Mendel, Text Book of Physiological Chemistry, 6th Ed., from 7th German Ed., New York, 1912, pp. 808-820.

[14] This matter is ably discussed by Crowder, Ventilation of Sleeping Cars, Trans. Amer. Soc. Heating and Ventilating Engineers, XXI, p. 274. 1915.

The common types of rapid air-testers are graduated usually much as follows:

0.07% carbon dioxide.....*not good.*
0.10% carbon dioxide.....*poor.*
0.20% carbon dioxide.....*very poor.*
0.40% carbon dioxide.....*extremely poor.*

In the closest rooms, the carbon dioxide content seldom exceeds a few tenths of one per cent. As soon as the percentage of carbon dioxide is raised artificially or by unusual conditions (as in certain rooms in breweries) there is a wide range of physiological response to be noted upon the part of the respiratory function to meet the changed external conditions. For 2 per cent. carbon dioxide in the inspired air, pulmonary ventilation is increased about 50 per cent. For 3 per cent. carbon dioxide in the inspired air, pulmonary ventilation is increased about 100 per cent. For 4 per cent. carbon dioxide in the inspired air, pulmonary ventilation is increased about 200 per cent. For 6 per cent. carbon dioxide in the inspired air, pulmonary ventilation is increased about 500 per cent.

Up to 3 per cent. the increased respiration is scarcely noticed, unless muscular work is done; at 5 per cent. there is distinct panting; at 7-8 per cent. the dyspnœa becomes distressing; at 10-11 per cent. headache, nausea and chilliness usually appear, though a tolerance for air containing 10 per cent. carbon dioxide may be developed; at 30 per cent., unconsciousness and suffocation are soon produced; at 35-45 per cent., experimental animals die. See Rosenau, loc. cit., p. 670.

Haldane, with others, has worked most exhaustively along this line. See also Hammerstein-Mendel, for discussion on these points.

[15] The odors are due to constituents of sweat, such as the fatty acid, butyric, and some of its homologues; to volatile matter from foul mouths, decaying teeth, and from the intestinal tract; and to excrementitious matter from fouled clothing, etc.

[16] Cf. Rosenau, loc. cit.

[17] The chemical composition of sewer air depends upon the extent to which decomposition of the sewage is going on, and upon the extent to which the sewer is ventilated. It is ordinary air let in from the outside, contaminated with such gases as occur in the sewage-disposal plants in least diluted condition. For the composition of gases found in settling tanks in various places, see Engineering Record, February, 1915. Some-

times hydrogen sulphide accumulates in appreciable amounts in poorly ventilated parts of sewers.

[18] This matter is exhaustively treated by Winslow, Report of the Sanitary Committee, National Association of Master Plumbers of the U. S., for 1907, 1908 and 1909.

[19] Harrington-Richardson, Manual of Practical Hygiene, 4th Ed., Philadelphia, 1911, p. 285.

[20] See classical work of Ross, British Medical Journal, 1897, and succeeding years. For full list, classification and geographical distribution of these mosquitoes see Castellani and Chalmers, Manual of Tropical Medicine, 1913.

[21] Evidence for and against the existence of a poison in exhaled air is summed up by Leonard Hill (and others) in Smithsonian Miscellaneous Collections, Vol. 60, No. 23, Publication 2170, p. 29 and ff.

[22] See foot-notes 13 and 14.

[23] *Pope's Essay on Man.*

[24] Experiments by Leonard Hill and others. For ref. see foot-note 21. Also, Lancet CLXXXIV, I, p. 283, 1913. Also "Reinspiration of Expired Air," Trans. Amer. Med. Assoc., 1913.

[25] Sir Oliver Lodge, "Pioneers of Science."

[27] Encyclopædia Britannica, 11th Ed. "Copernicus."

[28] E. Huntingdon, "Civilization and Climate," Yale Univ. Press, 1915.

[29] The percentage by weight of water in the air we breathe does not exceed 5 per cent., and usually ranges from 0.4 to 3.5 per cent. The value of 5 per cent may be reached at 105° F. when the air is saturated with water vapor and the barometer is at 29.92 inches.

[30] The conclusion, when the testimony of palæontology and embryology is accepted as evidence, is that the sea originally contained all life of which we have record and that man's forbears were marine animals.

[31] Anaximander of Icnia (fifth century B. C.) was the first to give a scientific designation to the wind, when he defined *wind* as *a flowing of the air.* See McAdie, "Principles of Aerography," New York, 1917, p. 1.

[32] Enc. Britannica, 11th Ed., Vol. II, p. 48.

[33] The Law of Conservation of Energy has been shown by the experiments of Atwater and others upon men enclosed in a large calorimeter to be true when applied to the energy changes within man, to within 0.1 per cent. See Bulletins of U. S. Dept. of Agriculture, Office Experiment Station, 44, 53, 63, 69, 75, 109, and 136; also Rep. of Storr's Agr. Exp. Sta., 1891-1895; for full treatment of foods and energy.

[34] This estimate rests upon De Chaumont's figure for the proportion of the total energy that is lost as heat. The proportion in Hueppe's figures is practically the same. Rosenau gives a higher proportion (80 per cent.) of the total energy lost as heat.

[35] Actually, this temperature would be attained in less than 4 hours; for the average specific heat of the human body is less than that of water, since water has the greatest specific heat of all known substances and man does not contain over 65 per cent. water.

[36] These are estimates resting upon data in Hammerstein-Mandel.

[37] Estimates by E. Vernon Hill, Trans. Amer. Soc. Heating and Ventilating Engineers, XXIII, p. 622.

[38] The statement in percentage, of the amount of water already in the air as compared with the whole amount that could exist as vapor in the same space at the same temperature is called the *relative humidity*. The ability of the air at any temperature to relieve man of heat by evaporation from his body is inversely as the relative humidity; the proportionality factor is, of course, a complex one.

[39] Rosenau, loc. cit.

[40] Pembry and Collis, Proc. Phys. Soc., Oct. 21, 1911. Cited by Leonard Hill and others, Smithsonian Miscellaneous Collections, loc. cit. Haldane, Journ. Hgy. 1905, V, p. 494.

[41] Leonard Hill, and others, loc. cit.

[42] This fact has been a part of human experience, it would seem, long before it was clearly stated. The rocking chair, and the swinging cradle are aids to ventilation in rooms so closed that the temperature and humidity have become slightly too high for comfort. In summer, when the temperature and humidity are uncomfortably high, ventilation is obtained by many through the use of the automobile. The so-called "speed craze" may be, in sane people who indulge themselves, merely a *comfort* craze.

[43] Hermans, Archiv. f. Hyg. I, p. 1, seems to have been the first (1883) to point out that the physical factors, temperature and humidity, might be of greater importance than the chemical factors in determining the quality of the air. On these points, see Leonard Hill, and others, loc. cit. Flugge, with others, Zeitsche, f. Hygiene, XLIX, p. 363, confirmed (1905) Hermans' main contentions.

[44] See, Rosenau, loc. cit., p. 748.

[45] The quantitative determination of carbon dioxide in vitiated air is by no means without significance. It is the most convenient laboratory measure of the number of times the air of a room has been rebreathed. It resembles the enumeration of B. Coli in potable waters, in that while in itself harmless, its quantity serves as an index of re-usage, and as a ground for the presumption of safety or danger. Crowder, loc. cit., has pointed out the interesting fact that the figure arrived at as the number of cubic feet per individual per hour needed to maintain the requisite degree of chemical purity in the air of a room (by determination of carbon dioxide), corresponds closely with the corresponding figure arrived at by calculating the cubic feet of air required per hour to absorb the heat of an ordinary adult within the range of temperature compatible with comfort. He states: "An ordinary adult will produce—and must be relieved of—enough heat in the course of an hour to raise the temperature of 1,000 cubic feet of air by 15° or 20° F."

[46] Huntingdon, Amer. Review of Reviews, LVIII, p. 287, 1918.

[47] "The opinion is unanimous that hitherto engineers have devoted their attention to the standardization of apparatus and the question as to what constitutes good ventilation has been accorded scant attention. so we know less about ventilation than we do about applying methods of

obtaining it. * * * The engineer was able to supply any amount of air at any temperature or degree of humidity, and with any air-movement demanded, but he had little information as to what would constitute good ventilation." W. W. Franklin, Trans. Amer. Soc. Heating and Ventilating Engineers, XXII, p. 370, 1916.

[48] "Degree of Discomfort" Chart. Heating and Ventilating Magazine, XV, No. 8, p. 12. 1918. See also, E. Vernon Hill, "Synthetic Air Chart." Trans. Amer. Soc. Heating and Ventilating Engineers, XXIII, p. 225. 1917. Also, "Ventilation Standards and the Synthetic Air Chart." Trans. Amer. Soc. Heating and Ventilating Engineers, XXIII, p. 607. 1917. Discussion of papers on Ventilation, *Ibid.*, p. 644.

The errors in the original graph in the Heating and Ventilating Magazine have been corrected in making the drawing in Fig. 1. The data for the curves was obtained from Bull. 235, "Psychrometric Tables," Weather Bureau, U. S. Department of Agriculture.

[49] A report on the first year and a half's work was made January 20, 1916, before the Annual Meeting, Amer. Soc. Heating and Ventilating Engineers. Also see Amer. J. Pub. Health, Feb., 1915. The Part Played by Temperature in School Room Ventilation is discussed in "School and Society," Vol. II, No. 28, p. 55. Are School Rooms Drier than Deserts. discussed in Trans. Amer. Soc. Heating and Ventilating Engineers, XXIII, p. 629, 1917. Two members of the Commission served on the Committee on Standard Methods for the Examination of Air, that made a final report to the Amer. Public Health Association in 1916; see Amer. J. Pub. Health, VII, p. 54, 1917. D. D. Kimball, the engineer on the Commission, reported with J. I. Lyle and A. K. Ohmes, at length to the Amer. Soc. of Heating and Ventilating Engineers, on the Testing of Atmospheric Conditions and Heating and Ventilating Equipment. Trans. Amer. Soc. Heating and Ventilating Engineers, XXIII, p. 453. 1917. C. E. A. Winslow reported upon "The Kata Thermometer as a Measure of the Effect of Atmospheric Conditions upon Bodily Comfort." Science, N. S., XLIII, p. 716, 1916. F. S. Lee has reported on the deleterious effect on muscular tissue, of high temperature combined with high humidity; Amer. Journ. Physiology, XL, May, 1916. Work on the deleterious effect of breathing hot, dry air, etc., has been reported on before the Amer. Laryngological, Rhinological and Otological Society, 21st An. Meeting, June, 1915. See also, "Effect of Humidity on Nervousness and General Efficiency," L. I. Stecher, Columbia Univ. Contrib. to Philosophy and Psychology, Vol. XXV, No. 3. Several other papers by members of the Commission have also appeared.

ANTHRAX.

BY

C. FRAZER HADLEY, M.D., CAMDEN, N. J.

(Read before the Philadelphia County Homœopathic Medical Society, Jan. 9, 1919.)

About five years ago I received the appointment of surgeon for the Keystone Leather Co. of Camden, N. J., and was asked to equip an emergency hospital where their employes could be given modern surgical treatment. During this period of five years, we have treated 7493 cases and made 21,282 surgical dressings. Of this number we have had 11 cases of anthrax, which I have made the subject of this paper. This subject has been of great interest to me owing to the rarity of this infection in man, in fact it is the rarest of all infectious diseases. When you come to consider the number of cases we have treated in the hospital and only 11 cases of anthrax in five years, you can readily see that it is infrequent even in the men who work in the leather factory, where it is mostly found.

Anthrax is primarily a disease of animals, such as cattle and sheep, but is transmitted to man in a number of industrial pursuits. Included among those who have died of it in this country are hide and skin handlers, and other tannery employees, longshoremen, wool sorters, hair workers, brush makers, paper makers, farmers, ranchmen, liverymen and veterinarians.

In man contagion commonly occurs through an abrasion of the skin, resulting in the so-called "malignant pustule" or in "malignant edema." Wool sorters' disease, or pulmonary anthrax, is a less frequent but almost invariably fatal form of the disease, caused by inhaling dust or particles of hair or wool from diseased animals. In rare cases the spores find entrance to the digestive tract and produce a gastro-intestinal attack.

The origin of anthrax is lost in antiquity. Some authorities trace it even to the time of Moses and identify it with the sixth plague of Egypt. Hippocrates, Galen and Pliny the Elder all describe carbuncles, which are diagnosed as anthrax by some modern authorities. Periodic devastating epidemics

of the disease are mentioned by numerous writers, medieval and modern. During the latter part of the eighteenth century a number of valuable papers were written by French physicians, who called it "Charbon" and by the Germans, who named it "Milzbrand." It was not, however, until a century later that the true nature of anthrax was revealed. In France in 1849 an investigation was begun by a group of medical men, in the course of which it was established that anthrax in man and anthrax in animals are identical.

The bacillus of anthrax was the first bacterium of disease ever discovered, and its isolation marks the birth of the modern science of bacteriology. In 1850 a French village physician, named Rayer, found in the blood of a sheep, which had died of anthrax, what he called "little thread-like, motionless bodies about twice the length of a blood globule." Robert Koch, in 1876, proved the causal relation of the bacterium to the disease, and furthermore, demonstrated that the anthrax organism passed through the two stages, that of bacillus and spore. At this point Pasteur took up the inquiry and verified Koch's observation of the reproduction of the bacteria through fission and by spores. The experiments of these two men made possible the further scientific study of anthrax. The bacillus of anthrax is a cylindrical or rod-like body of 1-5000 to 1-2500 inch in length and about 1-25,000 inch in diameter. Viewed with the microscope it is motionless, straight and transparent. In the blood and other fluids of living animals, the bacillus multiplies very rapidly by fission. The growth of the bacillus can take place only in the presence of substances entering into the composition of the bacillus itself, namely water, nitrates, carbohydrates and minerals, a temperature of 53 to 113 degrees F. and a supply of oxygen are also necessary.

Another mode of reproduction is by means of spores. Spores can be formed in a medium similar to that favorable to the growth of the bacillus, except free oxygen is necessary; for this reason spores never form in the blood of living animals. It has been discovered that unlike the bacillus, the spore is marvelously resistant, a circumstance which makes the struggle with the disease particularly difficult. The spore contains in itself the elements necessary for life and can subsist for years, while the bacillus left to itself soon dies.

The blood of anthrax infected animals containing bacilli,

loses its virulence if exposed for 15 minutes to a temperature of 131 degrees F. The spore, however, is more resistant. Two hours of boiling are required to kill all spores contained in a liquid culture; raised in such a medium to 221 degrees F. a few spores may resist for about 15 minutes. In a dry medium the spores stand a temperature of 248 to 266 degrees F.

Equally resistant is the spore to antiseptics. Experiments have shown that while the bacillus is easily destroyed, only very high doses and prolonged exposure have any effect on the spore. The bacilli are easily stained by the usual aniline dyes and by Gram's method.

Hardly a country in the world is entirely exempt. Russia and Italy are reported to be most severely affected by both animal and human anthrax. In the United States, anthrax is frequent among animals in the lower Mississippi Valley, in the Gulf States, in the East (chiefly on the banks of the Delaware River), and in some of the Western States. In South America it is prevalent in the less civilized districts of Argentine and in Patagonia and Uruguay. The worst ravages of the disease are reported from Asiatic countries, namely Siberia, Persia, Asia Minor, China and India.

Human beings contract the disease mainly through the handling of infected animal material. Bites of insects and even of pet animals who have been feeding on diseased material have been known to convey the infection. The eating of diseased meat has also been suspected. A certain number of cases have been traced to spores found in the hair of shaving brushes. In the majority of cases infection takes place through a scratch or cut in the skin; in such cases external anthrax results. This can be of two kinds: malignant pustule, malignant edema or erysipelatous anthrax. More rarely the germs are inhaled and infect the respiratory organs, or enter with food into the digestive tract. This is the origin of internal anthrax, with its two forms—pulmonary and gastro-intestinal. At the site of inoculation there are within a few hours, itching and uneasiness, and the gradual formation of a small papule, which soon becomes vesicular. Inflammatory induration extends around this and within thirty-six hours, at the site of the inoculation there is a dark brownish eschar, at a little distance from which there may be a series of small vesicles. The oedema produces very

great swelling of the parts. The inflammation extends along the lymphatics and the neighboring lymph glands are swollen and sore. The appearance is very characteristic and once seen will not soon be forgotten. Except for the local symptoms, slight cases are uneventful. Serious attacks are marked by fever, rapid heart action, malaise, in more severe cases marked prostration and delirium. A characteristic symptom of anthrax is the absence of pain and anxiety on the part of the patient. In malignant oedema, the papule and vesicle are absent. The oedema usually covers an extensive surface and is most frequently situated on the eyelid, neck, or forearm. The oedema reaches such a grade of intensity that gangrene results and may involve a considerable surface. The constitutional symptoms become grave and death usually takes place.

The internal varieties of anthrax are comparatively rare. The symptoms are not characteristic and can be mistaken for other diseases. The gastro-intestinal form begins suddenly with great weakness, pain, vomiting, colic, distention of the stomach and abdomen, diarrhoea, difficulty in breathing, weak pulse and cyanosis. Death occurs in a state of collapse.

Pulmonary anthrax is also called wool sorters' disease. The patient is seized with a chill, profound prostration. The breathing is rapid, and severe pains in the chest, difficult breathing and cyanosis. Auscultation reveals congestion and oedema of the lungs. The patient dies in a state of collapse. Fortunately I have not had either of the above forms to treat.

The diagnosis should be readily made from the character of the lesion and the occupation of the patient. When in doubt, make a smear from the pustule and submit to the bacteriologist. It has only been within recent years that our Boards of Health have required the reporting of human anthrax. As late as July, 1911, only seven states required it. But many have followed the original seven and January, 1916, found twenty-four states and Porto Rico requiring the reporting of anthrax. Our own state—New Jersey—passed the law which went into effect July 4, 1912. From July 4, 1912, to May 1, 1916, the State Board of Health received thirteen certificates regarding cases of anthrax: all but one occurred in my own city of Camden. Only one of the thirteen cases was fatal, and he was employed at our own factory, the Keystone Leather Co. This case occurred just before I

opened our hospital, and was one of the factors that brought about its establishment. New York's law went into effect September 1, 1911, and between that date and March 31, 1916, twenty-three cases were reported with thirteen deaths. In Pennsylvania from January 1, 1913, to January 1, 1916, forty-nine cases were reported, seven of which proved fatal. The Philadelphia Hospital reports thirty-two cases from January, 1909, to April 30, 1916, six of which were fatal. The Massachusetts General Hospital, from June 27, 1881 to April 26, 1916, reported thirty-five cases, six of which died. From these statistics you can get some idea of the rarity of the infection and the fatality.

Treatment. The resistance of the human body to bacterial infection plays a prominent role in the treatment of anthrax. Since the eighteenth century extirpation of the lesion by excision has been most universally practiced and is still followed by some. Personally I do not use it, as I think there is danger of carrying the bacteria into the circulation and setting up a general infection, and some of the cases I have had it would have been nearly impossible to extirpate owing to the situation of the lesion.

Cauterization by the hot iron, electro-cautery, carbolic acid or some other corrosive acid, has also been used.

My own method is fulguration. I have used it in seven out of my ten cases. To prove its value I made a smear from the pustule and sent it to my bacteriologist who reported the smear was loaded with anthrax bacilli. I then thoroughly fulgurated and waited two days, when I made swabbings from the pustule and sent to the Mulford Laboratory at Glendolen, where they made cultures and reported back that no anthrax bacilli were present. As far as I can learn I am the first to use this method. I find the necrotic centre of the pustule is thrown off quicker, healing is facilitated, and very little scar left. The other three cases I used pure carbolic acid to swab out the pustule each day. The healing took very much longer and they all have large scars which look like the scar of vaccination.

Serotherapy is still somewhat in the experimental stage. In 1895 Professor Slavo, of Italy, began to use a serum on animals, and in 1897 on human beings. Over a period of six years it was used in 164 cases with only 10 deaths—a mortality rate of 6.1 per cent. compared with 24.1 reported

by Italian statistics. H. K. Mulford Co. are now manufacturing anti-anthrax serum. I have used this serum in all but one of my cases. It is supplied in glass syringes containing 10 c. c. and this can be injected intra-muscularly or, in severe cases, intra-venously. I have used from 10 c. c. to 200 c. c. according to requirements of each individual case. The temperature and pulse are usually my guide to repeating the injections. In nearly every one of my cases, from three days to one week after the last injection the patient will have a most severe urticaria and in one case it looked like a erythema multiforme. The first case this occurred in alarmed me very much, but in talking with Dr. Hitchens, of the Mulford Laboratory, he assured me this was very common and now I usually watch for it. Internally I have used Lachesis trig. 13x dilution in all ten of my cases. I find that in 1853 Carroll Dunham reported that he cured eight cases of anthrax with Lachesis. After fulguration I have the pustule and surrounding skin covered with a thick coating of ammoniated mercury ointment 20 gr. to oz. and this is continued until pustule is healed. In one or two cases when healing was slow, I used pure balsam of Peru to stimulate granulation. I keep my patient in bed and on liquid diet until temperature drops to normal, and then allow them out of bed and feed them stimulating food.

Quite recently I took up with the Mulford Laboratory the question of preparing an anthrax vaccine. Dr. Hitchens, the Director of the Laboratory, seemed to think it impracticable owing to the fact that we were dealing with both the bacilli and spores. In preparing a vaccine the pathogenic bacteria suspended in physiological salt solution are sterilized by heat, and to kill the anthrax spore it would require a degree of heat so great that it would inhibit the immunizing power of the vaccine. I trust the time is not far off when we, who are called to treat this grave disease, will have an efficient vaccine to fight this infection.

HISTORY OF INDIVIDUAL CASES.

Case No. 1. W. B., American, age 23. Inspector of Russian horse hides. On March 5, 1915, discovered a small papule on left temple, stinging sensation, feeling of malaise. Next day the papule had enlarged and became a vesicle with a brownish center. Temperature was 101 degrees. I sus-

pected anthrax and made a smear which came back positive. Patient was ordered home, put to bed under the care of a trained nurse. The lesion was cauterized with pure carbolic acid and covered with a thick coating of ammoniated mercury ointment. Anti-anthrax serum injected every eight hours until temperature came to normal, then less frequently. Patient received nineteen injections or 190 c. c. of serum during the attack. Lachesis was used throughout the whole attack. He was rather slow in recovering his strength owing to the marked mental depression. He knew the nature of the disease and the danger, as he worked with the man who died a short time before from anthrax. He returned to work in one month and still has the scar on his temple.

Case No. 2. J. B., Italian, age 31, laborer in rawstock department (Russian horse hides). On October 11, 1915, claimed a "bug" flew out of a bale of hides and stung him on the right fore arm. Within three days had typical anthrax pustule. He was removed to West Jersey Homeopathic Hospital (isolated) and lesion fulgurated, then ointment of ammoniated mercury applied. Lachesis internally. Anti-anthrax serum given every eight hours. Arm and forearm became enormously swollen, enlargement of axillary glands, and marked tenderness and swelling of spleen. Temperature rose to 103 degrees but came to normal on the sixth day and patient was discharged from hospital on the twelfth day cured. He received 140 c. c. of serum. Last time I examined him he still had slight scar on forearm.

Case No. 3. E. H., American, age 29. Laborer raw stock department. June 22, 1916, noticed a small papule on chest, just below left nipple. Within four days had developed into anthrax pustule. Fever 100 degrees, slight malaise for ten days. Cauterized with pure carbolic acid and ammoniated mercury applied. Owing to very little constitutional symptoms, no serum was used on this case. Lesion healed in two weeks, and he continued work all the time. At present time has a scar about the size of a 50-cent piece.

Case No. 4. T. T., Italian, 46. Laborer raw stock department. November 20, 1916, discovered small papule on left cheek. Second day small brown neciotic center to papule. Smear was made, positive diagnosis. Fulgurated, ammoniated mercury applied, Lachesis internally. Removed to West Jersey Hospital. Isolated. Temperature rose to 100 degrees.

Dropped to normal sixth day. Anti-anthrax serum injected every twelve hours, 90 c. c. used through case. Patient discharged on eleventh day.

Case No. 5. J. A., American, age 17. Laborer raw stock department. Handled goat skins from India. On January 27, 1917, came into Keystone Hospital with anthrax pustule on left cheek. Temperature, 101 degrees. Malaise. Smear taken with positive diagnosis. Fulgurated, ammoniated mercury applied, Lachesis internally. Removed to West Jersey Hospital. Isolated. Face and neck became greatly swollen. Temperature rose to 104 degrees but came to normal on the fourteenth day and patient was discharged from hospital on the 17th day, cured. One hundred c. c. anti-anthrax serum used throughout the case. On the eleventh day had a severe urticaria rash over whole body. Severe itching.

Case No. 6. G. C., American, age 30. Glazer. Handled leather after it had been tanned. Alcoholic. Poor risk. On February 27, 1917, complained of "sore" on left cheek. Brought to Keystone Hospital and I diagnosed anthrax; smear was made with positive diagnosis. Fulgurated, ammoniated mercury applied, Lachesis given internally, and sent to the West Jersey Hospital (isolated). On second day temperature rose to 103 degrees and head became greatly swollen, enlarged cervical glands and cellulitis on both sides of neck. On second day 50 c. c. was injected intra-venously and on fifth day temperature came down to normal and patient was discharged from hospital on twelfth day cured. Ninety c. c. anti-anthrax serum used on the case. On seventh day urticaria appeared over whole body with severe itching, disappeared on the eleventh day.

Case No. 7. G. M., American, age 17. Trimmer of goat skins from India. March 12, 1917, brought to Keystone Hospital with anthrax pustule on left cheek. Temperature 103 degrees. Smear taken, positive diagnosis. Fulgurated, ammoniated mercury applied, Lachesis internally. Removed to West Jersey Hospital and 50 c. c. anti-anthrax serum injected intra-venously owing to high temperature and severity of symptoms, patient being a poorly nourished boy. Temperature came to normal on third day and discharged from hospital on thirteenth day, cured. One hundred and twenty c. c. of serum used in this case.

Case No. 8. H. D., age 30, colored. Laborer in raw stock department, handling goat skins from India. March 7, 1917, noticed a small papule on right side of face near angle of mouth. Within two days head and face were swollen to such an extent that patient could not open eyes or hardly chew food. Consulted his own physician, who diagnosed "blood poison" and tried to make incision under chin, but did not find pus. His own physician used antiseptic lotion, but as patient did not improve, he reported to Keystone Hospital on March 13 with a typical anthrax pustule. Smear was made with positive diagnosis. Pustule cauterized with pure carbolic acid and ammoniated mercury applied. Temperature 99.3. Anti-anthrax serum injected and in two days temperature normal. Discharged in seven days cured. Forty c. c. used on this case.

Case No. 9. H. W., American, age 17. Laborer raw stock department, goat skins from India. March 24, 1917, noticed small vesicle with hard center, with severe burning and itching under left eye. Reported to Keystone Hospital, diagnosed as anthrax, smear made with positive diagnosis. Removed to West Jersey Hospital. Fulgurated, ammoniated mercury applied, Lachesis internally, anti-anthrax serum injected. Temperature on admission, 102 degrees; came down to normal fifth day, and pustule healed on fourteenth day, when he was discharged from hospital cured. Seventy c. c. of serum used on the case. Swelling of face was so great as to completely close eye.

Case No. 10. G. B., American, age 16, frail, poorly nourished boy. Helper raw skin department, goat skins from India. March 31, 1917, I called to see him at his home, found right foot greatly swollen, with anthrax pustule on outer surface of foot. Three smears were made before bacilli were found and positive diagnosis given me by bacteriologist. Clinically I made diagnosis the first day I visited the boy. Removed to West Jersey Hospital, with temperature 102 degrees, with delirium. Fulgurated, ammoniated mercury applied, Lachesis internally, anti-anthrax serum injected. Temperature came to normal on fifth day and patient was discharged from hospital on the fifteenth day cured, and pustule healed. Forty c. c. of serum injected. I was very anxious about this case as he was a poor risk, owing to the poor hygienic surroundings of his home and being a frail lad.

Case No. 11. H. C., American, age 54. Helper raw stock department. June 18, 1917, my nurse at Keystone Hospital was called to see patient at 11 a. m. and given a history of patient being ill several days. Temperature 97.3. Pulse 104. Respiration 36. Pinched appearance, dizzy, mild delirium, cold perspiration all over body, labored respiration, frequent painful cough, expectorating thick, green mucous. Tongue, dry and brown at the base. Frequent attack of extreme exhaustion.

I saw patient at 6 p. m. and made a diagnosis of pulmonary anthrax. Had sample of sputum and blood examined with a positive diagnosis.

At 11:30 p. m. 100 c. c. of anti-anthrax serum was injected internally, but patient never rallied and died at 3 a. m.

I am very sorry I did not see the patient at the beginning of the attack.

RENAL HEMATURIA.

BY

LEON T. ASHCRAFT, M.D., PHILADELPHIA, PA.

Associate Professor of Surgery, Hahnemann Medical College of Philadelphia; Surgeon to Hahnemann and Women's Homœopathic Hospitals.

(Read before the Homœopathic Medical Society of Philadelphia County, January 9, 1919.)

The presence of blood in the urine is so disquieting to the patient that he usually seeks the physician's advice immediately. The latter should at once endeavor to learn the source of the bleeding and determine its cause. It is extremely important to do this, because it is impossible to apply correct therapeutic measures until this information has been obtained; for it must be borne in mind that hematuria is merely a symptom, and that it is the underlying cause that must be treated.

The blood may come from any portion of the urinary tract. In the majority of cases, it may be traced either to the prostate, in males, or to the bladder, in persons of both sexes. It may, however, have its source in various portions of the ureter; and in many cases, it is purely renal in origin. This paper is concerned solely with these latter cases.

Quite a goodly number of causes for bleeding from the

kidney exist. With the most of these, however, the urologist has very little to do, the condition being readily recognized and treated by the general practitioner. These causes include pregnancy; peculiar conditions of the blood, such as hemophilia, scurvy, purpura, jaundice, and leukemia; intoxications from the malignant acute fevers and various acute poisons, such as cantharides, turpentine and urotropin; and some nervous diseases, including tabes and neuritis. Some other causes of renal hematuria are seldom or never encountered in this country, such as parasites of various kinds, among which is the filaria sanguinis hominis; although cases due to the malarial organism are still met with occasionally.

The cases that most frequently come to the attention of the urologist are due to the following causes, in the order of their frequency: stone, tuberculosis, tumor, pyelitis and nephritis, or the so-called essential, or idiopathic hematuria. A small number are the result of trauma, embolism and infarct of the kidney, varices, telangiectasis or syphilis.

I shall not attempt to discuss those rather rare cases that are dependent upon an injury or those that are due to diseases of the blood or the intoxication of fevers, but shall confine my remarks to those produced by the commoner causes.

In order to make a diagnosis of the source of the bleeding, one must get a complete history of the case, make a thorough examination of the urinary tract, and sometimes also subject the patient to a general physical examination, including a Wassermann test. All other sources of bleeding must be excluded, and it should be borne in mind that blood in the urine of females is not of much significance unless the urine is obtained by catheterization.

In renal bleeding, the blood is thoroughly mixed with the urine, which, if voided in segments, has the same tinge in each. Microscopically it contains blood casts and renal epithelia; and the red corpuscles are merely swollen shadow discs that can scarcely be perceived. The urine is usually pale reddish-brown and cloudy. On standing, a sediment is deposited. No clots are present in this, except worm-like casts of the ureters. The color may, however, be dark brown or black, if the fluid has been retained for some time in the pelvis of the kidney or in the bladder, as in cases of obstruction. The sediment may contain shreds of tumor or particles of calculi. The blood may be mixed with pus or micro-

organisms, indicating infection; or albumin and casts may be found, showing the existence of nephritis.

The symptoms associated with renal hematuria naturally depend upon the lesion that exists—whether it is a stone, tuberculosis, tumor, pyelitis, or the so-called essential hematuria. Calculosis has been mentioned as the principal cause of renal bleeding, although blood is not always present in the urine in this condition. For instance, if the ureteral orifice is blocked by the calculus, no blood will be present, because the urine will be that coming from the healthy kidney. The urine is frequently quite clear in the aseptic stage, not showing any turbidity until kidney infection has occurred. Ureteral blood-casts are sometimes found in the urine in the course of an attack of nephrolithiasis, but usually do not appear until after the calculus has been expelled. As has already been remarked, particles of stone may be found in the sediment.

It is not necessary that the stones be large in order to produce renal hemorrhage; for this may result from a minute stone or even particles of sand, and be entirely disproportionate to the size of the foreign body. These cases are associated with pain of a boring character at the costovertebral angle and, at times, with the well-known colic that accompanies this condition. The pain may be relieved by rest, and aggravated by exertion. Frequency of urination is also one of the symptoms of calculosis. The nearer the location of the stone to the bladder, the more marked is the desire to urinate.

In patients with hematuria due to tuberculosis, the amount of the bleeding is in proportion to the degree of ulceration in the apices of the pyramids; but it is rarely profuse. It is not, however, a constant symptom. A renal tumor may be palpated. Pain is constantly present but varies in intensity at different times. It is commonly worse at night. Usually there is a history of long-standing urinary distress; and later on in the disease, the act of urination is followed by a torturing vesical tenesmus. There is a polyuria, which is characteristically worse at night; and, if sufficient care is taken in the examination, tubercle bacilli may be found in the urine, which is invariably acid except in markedly septic cases, in which the abundance of pus organisms sometimes modifies the acidity. If albumin is present in the urine, one should search for the tubercle bacillus; although tuberculosis may

exist without albuminuria. The well-known constitutional symptoms of tuberculosis are usually present.

When renal hematuria is caused by a tumor, the hemorrhage is intermittent. The patient shows loss of weight and complains of pain and a feeling of heaviness in the loin, where a mass may usually be palpated. When the tumor is on the left side a varicocele may be present. The x-ray may show a shadow in the kidney; but in most circumstances, it will show only an increase in the size of that organ, and not infrequently an alteration in its position—mostly in a downward direction. Corroborative evidence may be obtained from pyelography. The picture will then exhibit the changes indicative of tumor. In a case of hyper-nephroma on which I operated, the hemorrhage was so profuse as to almost half fill an ordinary vessel into which urine is voided.

Diminution in function, which is the deciding factor in the diagnosis of cases of tumor of the kidney, may be ascertained by the use of the phenolsulphonephthalein test. Clots and casts may be found in the urine, together with tumor fragments or cancer cells.

Hematuria due to pyelitis usually depends upon a stricture of the ureter, brought about by stone or tuberculosis, or by remote focal infection, such as that located in the teeth or the tonsils and is associated with pain and, at times, frequency of micturition.

About 20 per cent. of the cases of renal hematuria may be classified as essential. Under this caption are probably included two distinct conditions, characterized, respectively, by bleeding alone, and by bleeding associated with pain and colic. The former are apparently of different origin from the latter. Israel has advanced the view that the greatest number of these cases are due to lesions that involve both the tubules and glomeruli, as well as the mucous membrane of the pelvis, producing all the symptoms of an acute or chronic nephritis. This nephritis, he states, may be either unilateral or bilateral, and may affect all of the organ or only a small portion of it. A nephritis of one side may produce colic and hemorrhage, and a nephritis that is double-sided may cause colic in one side only.

Movable kidney sometimes has bleeding as a symptom. When one has been led to consider this diagnosis by the asso-

ciated neurotic, digestive and urinary symptoms, it is, of course, usually readily confirmed by palpation.

While all the methods of diagnosis are, of course, of value, I feel safe in saying that the intelligent use of the cystoscope constitutes the only reliable means of determining which kidney is bleeding, and its cause. I refer here to cystoscopy in a broad sense, as including ureteral catheterization, and sometimes even pyelography, as a means of furnishing corroborative evidence, because the added information obtained by the bacteriologic tests of the separate urines and the estimate of the renal function may be the determining factors in the diagnosis.

The diagnosis may be approximated by an inspection of the ureteral orifices, the expert cystoscopists being able to differentiate between stone and tuberculosis by the mere appearance of these openings. The ragged, retracted, ulcerated orifice of tuberculosis is typical. Simply traversing the ureters with the catheter may show that the source of the bleeding is a stricture, with ulceration in one of these tubes.

There are, of course, cases in which the origin of the bleeding remains a mystery. If, however, one bears in mind the fact that obscure medical cases are rarely met with, and confines one's inquiry to stone, tuberculosis, tumor, pyelitis and nephritis, one will be able to reach the right diagnosis in a great majority of cases.

The location and cause of the hemorrhage having been discovered, the next question that presents itself is that of the treatment; for it is upon the correct diagnosis of the cause and the proper application of treatment that the prognosis, in a great measure, depends.

The treatment of renal hemorrhage is that of the underlying cause. An operation is usually required for this; although, of course, expectant treatment should first be tried. I should not think of attempting any surgical procedures, particularly in cases of essential hematuria, without first employing dietetic, hygienic and medicinal measures. Plenty of water should be taken by the patient. Hamamelis, calcium chloride, ergot, cantharis, and quinine; and, in those cases that are due to syphilis, salvarsan or its substitutes, together with hypodermics of mercury, should be employed. The application of cold over the affected kidney is useful in some cases.

The results from expectant treatment are not, however,

as a usual thing, nearly so good as those from surgery. When hematuria is due to stone, the procedure varies in accordance with the size and location of the calculus. If it is small, and is lodged in the ureter, attempts may be made to dislodge it by passing a renal bougie and injecting olive oil. This method of treatment has, in many instances, proved effective in my hands. I first called attention to its efficacy in THE HAHNEMANNIAN MONTHLY about twenty years ago. Should a stone become firmly lodged in the ureter, however, ureterotomy must, of course, be performed. Stone in the kidney, according to its location, calls for either nephrotomy or pyelotomy; or, if the kidney substance is markedly destroyed, for nephrectomy.

The renal hematuria dependent upon tuberculosis of the kidney demands nephrectomy, provided that the other kidney is capable of carrying on the renal function. No other method of treatment, in my opinion, is worthy of consideration. The same may be said in regard to the treatment in cases of renal hematuria caused by tumor formation.

That due to pyelitis, caused by colon bacilli or pyogenic cocci, I am in the habit of treating by dilating the ureter about once in every two weeks, and injecting 5 c. c. of silver nitrate in strengths varying from 1-200 to 1-2 per cent.

In most cases, however, I have been accustomed to carry out the operation originally suggested by Edebohls, renal decapsulation. This, in itself, is not sufficient to cure the nephritis or remove the symptoms; but, in accordance with the procedure carried out by Guiteras, a number of years ago, which has the endorsement of most urologists, I make an incision into the substance of the kidney, in order to drain it. In many instances, this cures the condition.

When the bleeding is caused by a movable kidney, a properly fitted support should be provided. If there is enough fat in the abdomen to hold the kidney in place, it may be anchored. Sometimes a renal hematuria due to a varix or from an undetermined cause, may be cured by injecting 15 minims. of a 1-1000 solution of adrenalin chloride into the pelvis.

In the rare cases of bilateral hematuria, nephrotomy may be performed on both sides at one sitting.

When the cause is obscure, the possibility of remote focal infection must always be carefully considered.

DIET AS A PREVENTIVE OF CANCER.

BY

H. L. NORTHROP, M.D., PHILADELPHIA,

Professor of Surgery, Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of the State of Pennsylvania.)

ANYTHING that even suggests the prevention of cancer makes one "sit up and take notice," for it sounds like a dream from Arabian Nights. We recognize at least predisposing or contributory causes of cancer and we can lessen the likelihood of the development of the disease by removing the predisposing cause—we can lessen the likelihood of cancer of the tongue by attention to the teeth or by refraining from the use of tobacco; of cancer of the lip by prohibiting the use of the pipe; of cancer of the stomach by not taking food or drink which is extremely hot (as believed by Charles Mayo); of cancer of the cervix by repairing the laceration. We can lessen the likelihood of cancer by removing the irritation from mucocutaneous margins and other apparently susceptible parts of the body. But the causa vera of cancer remains an enigma.

We know that frequent or prolonged irritation applied to supposedly susceptible parts of the body is followed by the development of a cancerous lesion and it is my personal opinion that the profession is practically ready now to accept a belief in the heredity of cancer. Many cases and examples can be cited to show that cancer "runs in families," but not one case can be presented to prove that the disease is communicable or contagious. No nurse or doctor, as far as anyone knows, ever contracted the disease from a patient.

Many theories of the cause of cancer have been set forth, yet none has been sufficiently plausible or adequately substantiated to warrant acceptance, and the medical profession (as a profession) is just as much in the dark on this point today as it was one hundred years ago.

And now let me ask a pertinent question: Has Dr. Horace Packard, of Boston, presented to the medical world a plausible theory of the causation of cancer? I believe that he has. Dr.

Packard is a prominent member of the medical profession, a conscientious observer, an erudite thinker; he is logical, practical and scientific. Whatever I know or believe about demineralized food as a possible factor in the causation of cancer I have learned from Dr. Packard. I have nothing original to offer on this subject.

It became apparent to Packard a number of years ago that some other line of study of a broader and more comprehensive character than the laboratory search for a cancer cell or a cancer microbe or a cancer toxin must be followed if we are to hope for the prevention or cure of this scourge of the human race.

Briefly explained, Packard's belief is that all forms of malignant disease are possible only because of the absence or loss of immunity, and the invasion of a susceptible organism, or subject, by some as yet unknown parasite. He sets forth the following consideration of well known facts:

Cancer is a disease of civilized life and, for some reason not yet understood, it is more prevalent among the well-to-do and wealthy portion of the population. Primitive people do not have cancer, or to so slight a degree that it is a negligible quantity. As far as known the American Indian, prior to the advent of the white man and civilizing influences, did not have cancer. The Eskimo still lives as he has for countless generations, uninfluenced by modern life—he is practically cancer free. All races and tribes, upon whatsoever part of the earth's surface, who live a simple life, subsisting upon the natural products of the soil, whether of vegetable or animal origin, unmodified by civilized methods of manufacture or cooking, are practically cancer free. All efforts to graft cancer from a cancer-patient to another individual or to lower animals, have failed, although autografting, *i. e.*, grafting from one part of the patient's body to another, is easily and successfully accomplished; therefore it may be stated that animal tissues in a normal state are immune to cancer.

Approximately averaged, one-tenth of one per cent. of civilized people have cancer. For some reason as yet unknown, their resistance to cancer disease is lacking or has been lost. The lower animals in a wild state do not have cancer, or so rarely that it is a negligible quantity and has largely escaped observation. On the other hand, animals long in captivity not infrequently develop cancer, and in domesticated

animals cancer is an occasional occurrence. The artificial propagation of trout has long been an established industry, while a matter of much concern among trout breeders is the fact that artificially bred trout develop a tumor which threatens to seriously cripple the industry.

FUNCTIONS OF MINERAL SALTS.

(a) To maintain the normal composition and osmotic pressure in the liquids and tissues of the body, and to control the flow of water to and from the tissues.

(b) To produce contractility and irritability of muscular tissue. Rhythmicity of the heart's action is controlled by calcium, sodium, and possibly potassium in the blood. (Ringer's Solution.)

(c) Retention of sulphates and phosphates within the tissues runs parallel to the retention of proteins.

(d) Blood and other body fluids are kept alkaline through the balance between acid and base decomposition products in metabolism.

(e) Iron is used for hemoglobin in the blood and calcium plays an important part in coagulation.

INTAKE, ELIMINATION AND EFFECT OF WITHDRAWING SALTS FROM THE DIET.

(a) When animal diet alone is taken there is no desire for an addition of mineral salts. Binge, using sodium chloride as an example, explains this on the theory that vegetables have a very large potassium content. These salts react with the sodium chloride in the blood, with the sodium sulphate and potassium chloride the resulting products, both of which substances are foreign to the blood and will be thrown out by the kidneys.

(b) Dogs fed on mineral-free food died in 26 to 36 days; it is probable that they would have lived longer if entirely deprived of food.

(c) Mice fed on dried cow's milk thrived. If fed then simply upon the carbohydrates, proteins, fats, and inorganic salts contained in the milk, the organic salts having been omitted from the diet, they died in from 20 to 30 days.

PERCENTAGE OF MINERAL SALTS LOST IN PREPARING VEGETABLES.

	Boiling in Water.	Amount Lost.	Steaming.	Amount Lost.
Spinach	90 Minutes,	45%	15 Minutes,	25%
Spinach	10 Minutes,	42%		
Carrots	30 Minutes,	47%	15 Minutes,	13%
Onions	45 Minutes,	28%	30 Minutes,	25%
Asparagus	30 Minutes,	46%	30 Minutes,	15%
Cabbage		28%		4.6%

Much convincing evidence can be presented to prove that our modern methods of preparing food stuffs and of cooking are faulty and that because of these up-to-date, highly refined processes our breads, cereals, etc., are beautifully white and good-looking, but at the same time they have been deprived of food values—have been demineralized—and the tissues of the body suffer from mineral starvation. Tissues that were formerly capable of resisting malignant disease invasion are now susceptible to it. Is this not a serious situation? Can the mineral starvation of tissues be prevented? Can they be minerally fed? Yes, is the answer to all three questions. I believe, with Dr. Packard, that depriving the body of its food salts predisposes it to cancer, which then attacks the more vulnerable organs and locations, made vulnerable by exposure to sources of irritation. I refer to the cervix uteri, the stomach, the female breast, the mucocutaneous junctions, etc. Dr. Packard sets forth much interesting information on this subject in his several published articles. In one of them he states that modern organic chemistry and physiology teach that the mineral elements of plant life are absolutely necessary to the highest degree and type of animal life and the maintenance of health and vigor and resistance of disease.

Plant life is the connecting link between the crude minerals and salts of the earth and animal life. In the chemistry of plant life carbon from the air and nitrogen and water from the soil are taken up and transformed into the classes of familiar food materials which we term proteins, carbohydrates and fats. Coincident with the taking of these elements from the soil, many of the earth minerals and salts are also taken and elaborated and mixed more or less intimately with the albumins and carbohydrates. These mineral salts

contain the elements phosphorus, calcium, potassium, sodium, iron, silica, magnesium, sulphur: probably others in infinitesimal quantities. We know that lime and phosphorus are absolutely essential to the growth and development of the bones and teeth, and for their maintenance in adult life, and that the human body would be a shapeless mass of jelly without them; that potassium and phosphorus must be supplied for the muscles, and sodium chloride and iron for the blood.

Our knowledge of organic chemistry is so meager that we know little or nothing of the influence of the food salts upon the ultimate cells of the epithelium, endothelium, the nerves and nerve centers, connective tissue, and the structures of the organs of special sense, secretory glands, etc., but it is undoubtedly true that they could not exist and functionate without them. The salts of potassium, sodium, calcium, phosphorus, iron, silica, magnesium and sulphur, as abundantly found in commonly used vegetable food products, such as the cereals, potatoes, fruits, etc., are equally if not transcendently important with the proteins, starches, sugars and fats in the maintenance of vigorous, healthy animal life.

For years we have complacently seen all the flour mills of the world sending out to the public a material for bread-making consisting of but little more than wheat starch, while the salts of phosphorus, calcium, sodium, potassium, iron, magnesium and silica, in which wheat is particularly rich, are cast away. The demand of the civilized world is and long has been for bread which is white. No other article of food is in such universal and daily use among civilized nations as white flour bread. There are still communities of people isolated from the civilized world that the material for making bread which is white does not reach them, or, if at all, in such small quantities that it constitutes but a trifling proportion of their dietary. The interesting and impressive thing about these people is that they do not have cancer, or if at all, to so slight a degree that it is a negligible quantity. Those people, who inhabit the tropical portion of the earth, furnished by nature with a bountiful food supply of fruits and vegetables, rich in the food salts, which they acquire with the outlay of scarcely more effort than plucking from the trees, and which are consumed mostly without cooking, are cancer-free, or if afflicted at all, in so slight a degree that it is a negligible quantity. Turning now to the temperate zone: Along this

belt of the earth are the nations which have reached the highest type of civilization, and it is strictly among these people that cancer has steadily augmented until it has reached proportions which constitute a scourge.

There are approximately two hundred and fifty thousand persons afflicted with cancer among the people of the United States alone. England, France, Germany, Austria, and all the other central European countries, suffer from cancer in about the same ratio, viz., from eighty to something over one hundred to every ten thousand of population. For a time the Scandinavian countries and Ireland lagged behind, with a cancer percentage considerably lower than the other central European countries, but with the now almost universal bolted wheat flour for breadmaking, the percentage of cancer-infected people has risen to approximately that of the other European countries. Among the great rice-eating nations the same habits of diet exist except that rice is the staple cereal instead of wheat. The process of milling rice polishes off all, or nearly all, the portions which bear the mineral salts, leaving scarcely more than the starch. Therefore, if the theory of demineralization of the staple foodstuffs of the world as a negative factor in the causation of cancer be a tenable one, it fits in with the actual conditions in all the civilized nations of the earth.

Dr. Packard continues: "This communication is presented, not with the intention or wish to make extravagant claims that a method or principle of immunity against cancer has been discovered, but to ask the co-operation of my fellows of the medical profession to put to the test, in the promptest and widest possible way, this simple and easily applied method of dietetic management of all cancer cases under their care. Neither is it put forth with the thought of displacing any of the well-established methods of cancer treatment which are now in vogue, but as a definite food regime entailing no hardship of self-denial, based upon a plausible theory of cancer causation and prevention."

Some difficulty may be experienced in establishing patients upon a diet rich in the vegetable salts, because of the vague ideas abroad of what constitutes whole wheat bread, and of the difficulty of getting a palatable bread made in the homes or from public bakeries. The following is a recipe which makes an excellent whole wheat bread: One pint scalded milk, 1 pint boiling water, 2 tablespoonfuls butter, 1 table-

spoonful of lard, 1 tablespoonful of sugar, 1 teaspoonful salt, 2 tablespoonfuls of molasses, 1-2 yeast cake, 2 1-2 quarts whole wheat flour.

The dietary for cancer patients in conformity with the food salts theory should be something as follows:

1. Exclude all white flour bread, and all the articles into which white flour enters, from the diet, and substitute for it bread from whole wheat flour as above outlined.

2. Potatoes, next to bread, form the most important and widely used article of diet, and properly conserved in cooking they are rich in the food salts, which are located in the peripheral portion immediately beneath the skin. Therefore, one or two baked potatoes daily are advised, prepared as follows: Discard the heart, or central starchy portion, and eat the peripheral portions, rich in mineral ingredients, conserving the very outer skin. The common way of cooking potatoes, by paring raw, soaking in cold water for an hour or two, then boiling, dissolves out and boils out about 50 per cent. of the food salts.

3. Encourage the eating freely of well-cooked, fresh vegetables, apples raw or cooked in any way, and fresh, ripe fruits.

4. Meats and fish may be used moderately, according to inclination, bearing in mind that these probably make no difference one way or the other in the development of cancer. Flesh foods as consumed by the human family are relatively poor in the food salts, and at best the elements of such food reach us second-hand and constitute a very poorly balanced article of diet, in that we consume almost exclusively the muscle tissue, thus getting none of the food salts stored in the nerves, bones and other structures.

A certain amount of protein must be included in the dietary, and if not taken as flesh food it must be made up in eggs, cheese, milk and leguminous vegetables.

The writer begs from his colleagues of the medical profession an unprejudiced application of the theories and principles herewith set forth, not only in cases of cancer, but as far as possible in healthy persons, as a prophylactic against cancer. As adult life is reached and the cancer age approaches, the natural course of events in most people is a cutting down of the total amount of food material. The daily amount of food salts becomes, under the prevailing regime of demineral-

ized bread and potatoes, very small indeed. Vital resistance is lowered, fat-forming food elements predominate enormously over the vitalizing, nerve-sustaining, bone and muscle renewing, epithelium and connective tissue regenerating, vegetable food salts; and the individual becomes fat, flabby, anemic, neurotic, the prey of the first cancer microbe which comes his way.

The changing of the food habits of the nations is a large problem, but it lies with the medical profession and the public press. Civilized, intelligent peoples are not slow in adopting changes which promise enhanced strength of manhood and womanhood, longer life and increased immunity from disease. If the public demand that a bread of life shall be forthcoming in place of the colorless, demineralized, debilitating, constipating apology for bread now in popular use, then and not till then will the great flour mills send forth a flour for the world's bread containing all the food elements which nature's chemistry has stored away for the support of strong, robust, disease-resisting human life.

Acute Infective Nephritis.—Campbell and Rhea (*Surg., Gyn. & Obst.*, xxvii., 6, 611) have analyzed two groups of a series of 126 cases of infected kidneys of various kinds, except tuberculosis and cases secondary to stone. The first group consists of infected kidneys in which the clinical diagnosis was confirmed by operation, as well as by bacteriological and histological examination of the excised kidney tissue. In this group there are forty-four cases. The second group includes infected kidneys in which the clinical diagnosis was not confirmed by operation. This group includes fifty-six cases. The symptoms varied from those of the acute to those of a more chronic type. The most constant sign was cystitis. The authors believe that the cystoscope and the ureteral catheter constitute the only means of making a certain diagnosis. They do not operate at once in the acute stage of the disease, when there is no interference with drainage of the pelvis of the kidney; but if definite and permanent obstruction exists, if there is danger to life caused by toxemia, and if a fair trial of other means has been unsuccessful, they explore the kidney and, if necessary, perform a nephrectomy. Many cases of acute infective nephritis recover without operation. While vaccines have done good in a few cases, the authors have been disappointed in the results obtained. They were of no benefit in the acute stage, and even in the more chronic types of cases they were of little value. While ascending infection of the kidney sometimes occurs, the evidence is very strongly in favor of the descending type in the class of cases under consideration. In the majority of cases, a member of the colon group of organisms was isolated; although the staphylcoccus aureus, bacillus typhosus, bacillus pyocyaneous and the bacillus proteus of Hauser were occasionally found.—*L. T. Ashcraft.*

EDITORIAL

THE HAHNEMANNIAN AND ITS FUTURE.

With this number The Hahnemannian Monthly passes into the complete control of the Homœopathic Medical Society of the State of Pennsylvania by reason of deed of gift to be formally acted upon at the next annual meeting in September. In the meantime the Journal will be controlled by Trustees, through their direct representatives, the Committee whose names are attached to this communication.

Since 1914 when the World's War started, the Hahnemannian has had hard times. These became doubly hard when the war involved this country and expenditures for printing and paper soared. Advertisers discontinued their patronage. Subscribers enlisted and were carried on our books. One editorial worker after another gave up by reason of enlistment until eventually, editorial work became a one-man affair, and ceased to be a pleasure. Despite all this adversity, the storm, through wise management, has been weathered, and the prevalence of normal conditions is within sight.

A medical journal is part of the medical organization. While not intrinsically as important as the various medical societies, it is nevertheless a great power for good or evil according to the character of the man in the editorial chair. Let him be enthusiastic, able and loyal to the profession's interests, and societies and profession alike prosper. Let him be enthusiastic, able and selfish and societies and profession languish and die. Let him be indifferent, and journal, societies and profession just wither and are as dried leaves.

The homœopathic physicians of Pennsylvania are now the owners of The Hahnemannian Monthly. Their committee is but their servants, to work for their interests. The committee does not intend to exercise editorial prerogatives for an indefinite period. Their plans may be outlined as follows: In the first place, they are after an editor who will be enthusiastic, able and loyal, looking after the profession's interests. We

think we have him. He is at present in the service, and he is modest. He will work with us as best he can under present circumstances. In the meantime, your committee will work in accordance with its reputation for working.

We do not expect to do all the work; we have not the time for that. In fact, we shall take example from Tom Sawyer, and we shall edit the HAHNEMANNIAN as Tom whitewashed the fence. We shall obtain good collaborators who will relieve us of much of the strain of editorial duties, and yet we shall retain supervision until such time as we are no longer needed.

Who our collaborators will be we are not as yet in a position to decide. We have some valuable assistance already promised to us. Probably we will be able to announce the complete staff by the February issue.

Our readers will miss in this number the old department, "The Retrospect of Homœopathic Materia Medica." The omission will be for a few months only. Conditions have forced the change. War and its attendant difficulties have forced the retirement of several journals which could not withstand the strain, and a very large proportion of the active physicians entered the service. Laborers and literary production alike went to a low ebb, and for some time past, it has not been possible to find sufficient material in other journals. Hereafter matter belonging to the Retrospect will appear under Therapeutic Notes. In addition, there will be published materia medica notes having the stamp of authority, and therapeutic points culled from discussions of the various local societies. Personal communications not sufficiently extensive to warrant the production of a paper will be invited and published in these pages.

To our readers, let us request: "Boost, don't knock." The committee is your committee with our organization at heart. Your cause is their cause. Boom us, and we will work the better and the harder.

CLARENCE BARTLETT, *Chairman,*
C. SIGMUND RAUE,
WM. M. HILLEGAS.

COMPULSORY HEALTH INSURANCE: ITS STATUS IN PENNSYLVANIA.

It is somewhat of a mystery where the movement for health insurance had its inception and its backing. Whether it is socialistic or not, the same interests backed the Workmen's Compensation Laws and with such force and power that since 1912, thirty-eight states have adopted some form of Workmen's Compensation Law. So it looks as if it were coming and perhaps soon in some state or other, perhaps this year in New York or California.

Most European countries have some form of health insurance, some compulsory and some voluntary, and it has not been a great success abroad. In England it is a failure. In Germany and Austria, where it has been in force for twenty years, it has not only pauperized the medical profession but the masses of the people receive some of the worst medical service in the world. In Switzerland, since 1912, it is at its best. Whether or not health insurance is an economic necessity is still doubtful but the fact that the agitation in favor of it is spreading must make us consider the attitude of the medical profession on the subject. This whole question may be new to many readers, so I will go into it at some length and try to present both sides.

The following figures indicate the magnitude of the problem of illness, and of the prevention of sickness and its resultant distress: Probably 385,000 persons are ill at any one time in Pennsylvania, suffering from some form of illness—approximately 140,000 from severe and the remainder from slighter illness. The average illness per person is from 6 to 9 days per year (United States Public Health Service). It is estimated by physicians and sanitary experts, and probably with truth, that half of all illness is preventable. It is estimated that if the rather low average of six days rate per year per employee is taken, that there is $33,000,000 wage loss per year to employees in Pennsylvania from illness.

Organized relief societies report that illness is the most frequent disability in the families coming to them for aid, and not liquor (in an investigation in California of something over 150,000 cases of need coming to the notice of organized charities only 4 per cent. were traceable to liquor).

"The loss from illness to the employee is not merely a loss of time and money, and of physical strength, but means, in far too many instances, a gradual lowering of his standard of living, a period of privation and suffering for his family, and eventually a loss of self-respect when he is forced to resort to the final measure and apply for aid to a relief agency."

Half the sick men are struggling to keep at work because they cannot afford to be ill, so minor ailments go untreated and frequently develop into serious disabilities. Most employees are unable to save toward emergency such as illness and most are unable to pay in full for medical attention, therefore they either do not get medical attention, or the doctors do not get paid, and the doctors carry the burden which does not rightly belong on their shoulders alone—or they do not get medical attention until the illness is advanced and cannot be quickly remedied. Such neglected sick men easily become chronically disabled.

In 1917 there was introduced into the Pennsylvania Legislature a bill providing for compulsory health insurance. This was not passed, but the discussion developed a seeming need for a study of health conditions in Pennsylvania and a Commission was appointed to investigate and report. This commission has presented a preliminary report of its investigations of health conditions among employees and their dependents, under date of August, 1918, and I shall not hesitate to quote freely from this report and also from a lengthy article on this subject printed in the Pennsylvania State Medical Journal for November, 1918, by Dr. John B. McAllister, of Harrisburg, who is the medical member of this commission.

Health Insurance Commissions are studying this problem in the states of Wisconsin, Illinois, California, Ohio, Connecticut, New York and Pennsylvania, perhaps in others. A bill will be presented in California this year, and in New York a bill is being presented to the Legislature which has the support of labor organizations all through the state, back in the precincts where the voters are, and it will probably pass. The work of these commissions, especially that of the Pennsylvania Commission which I have studied, has so far merely been the investigation of the necessity of such a law and the possible good it may do. However, the distress caused by

illness is obvious, it has always been admitted. But the practicability of such a law is the most essential thing.

It is admittedly true that ill health does undermine the working efficiency of wage earners. It is also quite true that insurance protection against illness is found least often among those who need it most, and that when sickness comes they are stranded. Illness is the result of chance in most cases, but the burden all falls on the individual. Health Insurance aims to fairly distribute the economic burden between industry (the employers), the individuals (workmen), and the community. If there *could* be a *fair* system of taxation to do this, this would settle the matter.

These various conditions the commission believes it has developed in its investigation, and if accurate, and they probably are, then undoubtedly they should be bettered. Is compulsory health insurance an economic necessity and is it the solution, and is it practical? Might not the co-ordination of the many agencies now existing be made more effective under the State Bureau of Health, and so meet the needs of the situation? There seems far more chance of efficient and just administration under the Bureau of Health as administered by a man like the late Dr. Dixon, than under the supervision of middlemen, such as the insurance companies who are now making from 17 per cent. to 35 per cent. on the policies under the Workmen's Compensation Law in Pennsylvania.

"We must study the problem in all its aspects, not from medical interests alone. Like all vital questions there are many sound arguments on both sides of the health insurance. If health insurance is a good thing, and if the medical provisions of the draft are unsatisfactory may this not be the fault or result of our profession being slow in offering constructive suggestions?" (Dr. McAllister.)

Education in sickness prevention is mighty important. One of the investigations of the Pennsylvania Commission developed the fact that in those families studied, from $37 to $75 was the medical expense for illness per year, of which $6 per year per family was for patent medicines and drug counter prescribing. Illness is not necessarily the cause of poverty, only too frequently it is the reverse.

This work is mainly in charge of sociologists and the field of vision of most sociologists is contracted. They see only the poorer classes and the dread of poverty, and they

aim to squeeze into any such legislation all possible points that are constitutional. They wish to extend such insurance to the families or dependents of the employees, and if possible to include the expense of maternity cases. They do not seem to have decided as yet who are workmen, whether domestic servants rank as such, or the over-worked wife of the poor man. Nor have they as yet settled the problem as to old age and the unemployed, which constitute a rather large class of charity cases.

Several members of the Pennsylvania Commission are going to urge legislation on health insurance at the present session in Harrisburg, Mr. Isadore Stern, of Philadelphia, for one, and I feel that the Commission is indeed fortunate to contain such a man as Dr. William Draper Lewis, former Dean of the University of Pennsylvania Law School, who is broad minded and who fully realizes that for efficient results to ensue from health insurance the complete co-operation of the medical profession is necessary. He says: "Any social laws must be both sound and just."

Twenty labor organizations have declared for compulsory health insurance, although Mr. Samuel Gompers, the head of the American Federation of Labor, is against it. He says: "This fundamental fact stands out paramount, that social health insurance can not remove or prevent poverty."

Briefly, compulsory health insurance means that all employees shall have health insurance, to include a stated weekly monetary benefit and his medical attention. The cost of carrying this to be divided between the employees and the employers and perhaps the State. The suggestion is that the maximum amount per week should be either $12 or $15 and under that shall be two-thirds of the wages. At a recent conference in Philadelphia, attended by the writer, Mr. Lapp, chairman of the Ohio State Commission on Health Insurance, stated that they were preparing a bill to be presented to their legislature with definite schemes for the division of the expense of the law, and with provisions for minimum and maximum cash benefits, but on question, he stated that they were leaving the medical end of the proposed legislation to the future. He even suggested that an experimental scheme of medical attention be established and changed later as conditions arose. This might work out properly if such power could be placed in the hands of the Commission, but if it

would require amendments to a statutory law, the outlook in Pennsylvania for any such change would be very poor, as demonstrated by our experience with the present Workmen's Compensation Law dominated by insurance companies.

"As a physician I would object to this experiment upon the medical profession in Pennsylvania until the operations of the Workmen's Compensation Law are made just and fair to the physicians. If it was seen fit to enact a law giving the doctors of Pennsylvania the lowest remuneration under these laws in the whole country, what encouragement have we for better or even as favorable treatment under a larger scheme? To avoid a burden on employer and employee and keep down expenses, the medical profession is asked to give its services without fair recompense. We need not be ashamed to protect our interests in an economic way." (Dr. McAllister.)

I am leading up to just this—under such a proposed law the workmen get financial aid and medical attention, the insurance companies get enormous profits, there is a tremendous expense for the administration of the law, and what does the medical profession get?

No data have ever been presented to prove the success of such a law as viewed by the medical profession. Despite several verbal statements to the contrary, no report so far has shown that this practice has been successful in England. Quoting the British Medical Journal: "Health insurance has been a failure in England where it has not met the medical needs of the public nor provided sufficient hospital facilities nor sufficiently remunerated the physicians." Quoting Lloyd-George, Premier of England: "The number of dependents on medical charity has not decreased since the enactment of compulsory health insurance laws in England."

No health law can hope for success without the support and co-operation of the medical profession—they must "show us," for they need us. "Medical organization must be strong and united to enforce our just claims in this scheme." "Health Insurance is apparently not demanded by the public at large; the American laboring man is usually independent and prefers to pay for what he gets, and to get it where he chooses, not where he is forced to get it. As yet there is no evidence that employees and employers have been thoroughly canvassed as to their views, and as to whether they want it. Health insurance is very apt to lead to deterioration in the

treatment of the sick, work is apt to be done hastily and superficially, as most lodge practice is done." (Dr. McAllister.)

We must demand that one or more medical men be permanent members of any Commission to administer Health Insurance Laws. We must begin at once to formulate concrete schemes for the medical workings of such a law. In reference to the appointment of the physicians for service, this must not be left in the hands of the Insurance Companies or wholly to political favor. And particularly in regard to remuneration—compensation to medical men must equal that received in private practice. All such laws so far have underpaid the doctors. It is well enough to say that some of the burdens of the medical practitioner will be removed by reducing his charity work and that he will then be paid for all his work, even if on a smaller pro rata per call, but this is not exactly true, as I have already shown that poverty and illness will not be fully controlled by such a law. Nor can there be any justice in asking doctors to reduce their fees. There can be no objection to giving to the needy, but the medical profession must not be asked to carry the burden of this and to give their services at smaller fees than customary. Also there must be an absolute avoidance of contract medical practice, which has always tended to deteriorate the value of such services and also to cheapen medical advice and practice in the regard of the recipients. This would be doubly deplorable, after the hard struggle to elevate medical education for many years, for it is now getting on a high plane where further scientific advances are less difficult.

The members of a committee of the Pennsylvania State Homœopathic Medical Society, Dr. E. A. Krusen, of Norristown; Dr. Wm. Steele, of Philadelphia, and Dr. Wm. Hillegas, of Philadelphia, would be very glad to hear from any doctor in the state as to his views on the matter, especially from those practising in the industrial districts.

Comment in medical papers is invariably adverse, but the writer feels that health insurance in some form or other is coming and that the medical profession should be prepared and protected and we must do this part of the work ourselves, the sociologists will not do it for us.

Such a law will hardly decrease poverty, because employers will carefully choose only healthy employees, examined in advance medically, so as to minimize their percent-

age of expense and in consequence a large pauper class will be formed.

It seems rather a poor time just now to investigate the status of the working class, as they have been making so much money lately that when they return to ante-bellum conditions it will be a radical difference and the reduction in wages may result in a condition of poverty to the large percentage, who being always improvident, have made no saving during their acme of high wages, wages higher than they ever were and perhaps ever will be paid again. It is a very true saying that most workmen are just "two weeks from the poorhouse."

Economic conditions are false at the present time, and with the unfortunate spirit of unrest amongst workmen, amounting in many places almost to Bolshevism, it seems an unwise time to enact such a radical and reactionary law.

W. M. H.

THE STRENUOUS LIFE.

The death of Theodore Roosevelt at the age of sixty years is an event which furnishes food for thought. Colonel Roosevelt, although an intellectual of the highest type, nevertheless had developed strongly the other side of human nature, namely the love for adventure and a keen enjoyment of athletic sports. He lived a clean life and gave to the question of personal hygiene serious consideration. However, he worked inordinately and he can be classed among those men who have been aptly called human dynamos. There are many examples of these human dynamos. They put the average man to shame through their capacity for work and their ability to accomplish big things and carry responsibilities. They show an interest in all things and nothing is impossible to them. The world owes such men a heavy debt; without them many things would never have been accomplished.

The human dynamo, however, in spite of his powerful physique and exceptional nervous system, wears himself out and he pays the penalty for his colossal achievements by an untimely death. At all events, such is the history of most great men of this type. They usually die at the age of fifty or sixty years and rarely attain the three score years and ten which we accept as the legitimate time allotted to the average

man. It is a well known fact that physicians make a poor showing in this matter of longevity. Statistics indicate that among the professions the doctor is the shortest lived. Lawyers, clergymen and engineers live longer than the doctor.

Why this difference in the life risk in these professions? Many physicians unquestionally die in the performance of their professional duties from infections and from contagious disease. However, there is no professional work in which the wear and tear is as great as in the practice of medicine. There is also the temptation to lead the strenuous life and the medical profession offers many shining examples. I refer to the men who are known from coast to coast through their writings, their teaching and their professional success; whose consulting rooms are always crowded; who attend with regularity their local, state and national medical societies and who frequently take an active interest in responsible matters outside of their profession. It is needless to say that they rarely reach their three score years and ten.

The question may legitimately be asked whether it is worth the price. The men referred to of course never think of the price. They have a mission to fulfill, and they have the courage and the ambition to carry on until they have attained their goal or dropped in their tracks. But those among us who are not super-men and who must content ourselves with living up to our professional and domestic responsibilities as plain, ordinary citizens should take warning at the dangers of too much wear and tear and recognize the necessity for repair and rest and recreation.

Man must work but he also must play. A rational division of the twenty-four hours of the day into periods for work, rest and recreation is a necessity to health and longevity. The idea of the eight-hour day is not a new one. The workers who built the Temple of Solomon many centuries ago divided the day into three equal parts, namely, eight hours for work, eight hours for sleep and eight hours for recreation, social duties and worship.

It is an interesting fact that a number of eminent men who attained a good old age were in poor health most of their lives and performed their work slowly and with difficulty. Herbert Spencer and Darwin may be cited as examples of this class. Perhaps the fact that they found it necessary to conserve their strength and expend their energies judiciously had

much to do with their longevity. Our daily experiences bring us in contact with such individuals and we may even have one in our own family. It is not uncommon to find that a person who was delicate in childhood, whose life was despaired of in his youth, who spent much time and money on his health in his more advanced years by visiting health resorts, taking the various cures and ever taking interest in the newest cults of drugless healing, in other words, living so that he might live, has outlived most of his contemporaries although they were blessed with vigorous health but used these blessings recklessly. C. S. R.

Forceps Rotation of the Head in Persistent Occipito Posterior Positions.—A. H. Bill (*American Journal of Obstetrics*, December 1918) has used his modification of the Scanzoni maneuver in 249 cases of persistent occipitoposterior positions with excellent results. His technique is as follows. A true cephalic application of the forceps is made and the handles are then raised in the direction of the child's face and carried around in a large circle, first toward the patient's thigh and then posteriorly. The preliminary elevation of the handles tends to favor flexion of the head, and the large sweeping movement of the handles tends to keep the blades of the forceps in the same axis throughout the rotation, thus allowing the head to turn without difficulty. Up to this time no traction whatever is made, traction being employed only after the head is in a normal anterior position. No force is required in this rotation if properly carried out.. Failures in rotation or the necessary employment of force occur only when the operator tries to rotate the head by twisting the handles instead of sweeping them around in a large circle. The rotation should never be accompanied by traction but the head should be turned in that part of the pelvis in which it happens to lie whether at the brim, in the cavity or at the outlet; and in some cases in which the head seems to be too firmly fixed in the pelvis, it may even be pushed to a slightly higher level, where it will be somewhat freer to rotate. Too great emphasis can not be laid upon this step of the procedure. The method so often advised, that of first drawing the head down to the pelvic floor and then rotating it, is never advisable, for unnecessary force must always be used in drawing it down to this level while the occiput is still posterior. After the rotation is complete the forceps are naturally upside-down and must be removed and reapplied; but before one removes them it is justifiable to make slight traction, so as to fix the head in its new position. If the head slips back before the forceps are reapplied and it becomes necessary to repeat the manœuvre it is important to apply the posterior blade first, as this tends to support the head and prevent its rotating backward during the application of the anterior blade.

The time during the labor at which the forceps are applied naturally differs, but as a rule it may be said that there is no interference with the first stage of labor, and a reasonable time is allowed for spontaneous rotation.

—*N. S. Betts.*

GLEANINGS

PURPURA ABDOMINALIS IN EARLY LIFE—Weston (*Archives of Pediatrics* Nov., 1918) reports several cases of this rare and interesting condition and sums up the pathology and clinical course as follows:

Etiology: All the cases he saw were in blondes. This seems to be more than a coincidence. It is a condition of early life, and probably more than two-thirds of the cases occur in males. Among the causes mentioned are abnormal thinness of the blood vessel walls; abnormally high blood pressure; excessive amount of blood for the capacity of the blood vessels; an inherited predisposition to a faulty structure of the cells of the body and blood; defects in the mechanism of coagulation. All of these hypotheses must be viewed in the light of mere predisposing factors. The active etiological factor appears very far from definite, since in some of the purpuras they are secondary to some definite infection, or exist as a complication. Again, we see cases that appear essentially primary, i. e., no history of angio-neurotic edema, and no history of arthritis. Henoch, however, recognized the almost constant association of arthritis, and often angio-neurotic edema.

In reviewing the literature he was impressed with how inconclusive have been the efforts to explain the etiology of many of these cases. It seems highly probable that in a given case there may be several etiological factors, while in still another case, diligent investigation fails to reveal any satisfactory, or even plausible, explanation.

The investigation of Weil upon the blood of patients suffering from purpura were valuable, inasmuch as he found that in this condition there was plasmatic and delayed coagulation of the blood, just as spontaneous acquired hemophilia. He found that by injecting blood serum the condition was relieved by causing normal coagulation. After a great deal of investigation by Howell, Wright and Kinnicutt, Starling, von Pirquet, Duke and others upon the factors affecting the coagulation of the blood, it was found that the blood platelets play an important role. In purpura, they are greatly reduced in number, and that, by injecting small amounts of serum, their number was greatly increased.

Symptoms: The onset is usually characterized in children by loss of appetite, headache, irritability and great thirst, which usually lasts throughout an attack. Following these are the purpuric rash and abdominal crisis. Sometimes the abdominal pain precedes the rash, and vice-versa. Often there is severe pain about the joints. Unless careful examination is made, the spots may be so few in number that they may be overlooked. They may appear on any part of the body, and vary in appearance. They may appear as a small purple punctate spot, or as definite dark purple spots, varying from the size of a pea to the size of a quarter of a dollar. Sometimes both kinds are present. In addition to the skin manifestations mentioned,

there may be vesicles and papules present, and there may be great burning and itching of the skin. The pain is distinctly colicky in character, often very severe and difficult to relieve. It may shift from one part of the abdomen to another. The abdomen is often rigid and the bowels are generally constipated.—*C. S. Raue, M.D.*

Hemoptysis in Children.—Pierson (*Archives of Pediatrics*, Sept., 1918) comments upon the rarity of hemoptysis in children. The presence of blood in the sputum or bleeding from the respiratory tract may have sources other than the lungs and these must be excluded. For example, bleeding from the nose, with blood trickling down into the pharynx, must be excluded. We must also exclude such sources as bleeding gums, varices or ulceration on the tongue, pharynx, larynx or trachea. Although the cause of blood, which it is clear does come from the lungs, may be pneumonia, chronic passive congestion, lung abscess or gangrene, bronchiectasis or emphysema, it is from a tuberculous focus in by far the greater proportion of cases.

As a symptom of tuberculosis, hemoptysis is very rare in children. Such authorities as Holt, D'Espine, Hennig, Jacobi, Koplik, Von Pirquet, Rotch, Sticker, and many others, have reported individual, or collected cases, but whenever it is reported from a group of suspiciously tuberculous children, there are not more than 2 to 3% that manifest this symptom; and, if we agree with the anatomists and pathologists that tuberculosis gains entrance to the body more often through the intestinal tract, and thence to the lymphatics, and locates in the peribronchial glands as its first manifestation in the chest, it is easy to understand why so few children have this symptom as an early manifestation of the disease.

When bleeding from the lungs in childhood does occur, as an early symptom, it is generally due to the pressure on, and then erosion of, a vessel in the region of the hilus by enlarged or caseous lymph glands. If the lesion were further out in the lung tissue, the bleeding would more probably cause a pneumonic area or a marked dissemination of the disease. Pierson reports five cases in detail and sums up with the following conclusions:

Conclusion. 1. All cases of hemoptysis were due to bronchial gland tuberculosis. 2. The hemoptysis was probably due to pressure on, and erosion of, a vessel near the hilus by an enlarged gland. 3. Two cases that had tonsillectomy performed under a general anesthetic, have not improved as much as they should and would have, had they not been subjected to this procedure at that time. In other words, in such cases *delay this operation until they are in a stronger physical condition.* The adenoids, if troublesome, may be taken out with gas without serious consequence, and this should be the operation of choice when necessary. 4. Four of the 5 cases had been exposed to tuberculosis. 5. Two cases occurred in children of 5 years, 1 case in a child of 6 years, and 2 cases in children of 9 years. Four were girls and 1 a boy. 6. Physical signs correspond very definitely with x-ray findings; there is always increased dullness over the hilus and possibly over the more affected lung, but this is not as prominent a sign as the increase in harshness in the breathing. *A musical quality* to inspiration and expiration is of great importance as denoting a *potentially active irritating process.* These signs correspond to the increased hilus thickening, which was verified by x-ray examinations.—*C. S. Raue, M.D.*

War Neuroses, Shell Shock and Nervousness in Soldiers.—Under this title Col. Pearce Bailey, who is chief of the division of neurology and psychiatry, Surgeon General's Office, records his observation of these relatively common maladies in the *Journal A. M. A.*, Dec. 28th, 1918. The correctness of the term "relatively common" becomes apparent in the author's statement that France maintains 20,000 and Britain 26,000 beds mostly occupied by functional neuroses and hystericals. The previously held neurological conception that hysterical paralysis and contractures did not occur in conjunction with physical wounds is erroneous, but that as a matter of fact such complication is observed with frequency. This observation of course implies a compound diagnosis.

Among the observers there is unanimity of opinion that most cases are functional and curable, the more so the earlier treatment is instituted. In the American cases, the psycho-therapy is somewhat impaired by reason of the fact that by law all soldiers passed and enrolled for service have a clean slate against pre-existing ill health, and therefore in the neuroses, there is no psychical incentive for recovery. Nor can the neuroses be put down to cowardice. "It is not uncommon in French hospitals to see hysterical patients personally decorated and also wearing the fourragere."

The author describes three types of war shock. (1) Concussions which "justify the assumption of the existence of minute and more or less disseminated lesions of the central nervous system." (2) Neurosis of neurasthenic or psychasthenic type—which may or may not be concomitants of actual physical injury. (3) Hysteria, with all of its symptomatic ramifications. The treatment is of course largely psycho-therapeutic. The "wish to be out of the war" in a weary and exhausted soldier is certainly the equal of any Freudian unfilfullment, or as the writer states it: "A war neurosis is a personal reaction to a military situation and it must be cured in terms of the situation. Discipline, encouragement, strong electrical currents; if need be isolation." The importance of retaining these cases in service and under military discipline until they are cured is duly emphasized, and warning is given against elaborate and suggestive examinations, which, as is well known, serve to develop and foster hysterical manifestations.—*W. D. Bayley.*

Intraspinal Treatment of Cerebro-spinal Syphilis.—Cummer and Dexter (Cleveland, *Journal A. M. A.*, Sept. 7, 1918) record their personal experience over a period of five years with 220 intraspinal infections in 34 patients. The methods employed were those of Swift and Ellis (auto-arsphenamized serum) and Ogilire (human serum arsphenamized in vitro).

In 17 cases of tabes thus treated three made a symptomatic recovery, nine were decidedly improved, one moderately, three uninfluenced, and one ultimately died. In paretic dementia the authors believe that "the method has not given evidence of efficacy." "Properly employed" in neurological syphilis, the authors believe that this method of treatment "is not in any sense dangerous." (My personal experience is in conformity with the above views, excepting that I have seen one case of paresis or at least a complete clinical picture of this affection, recover completely, and now remaining well after several years.)—*W. D. Bayley.*

Early Diagnosis of Lead Poisoning, with Special Reference to Abdominal Pain.—Apfelbach, of Chicago, has studied this subject clinically in 934 cases of lead poisoning, and as a result offers the following conclusions:

1. The manifestations of an intoxication with lead are variable, sometimes presenting only one or two of the cardinal signs of this poisoning, which are colic, constipation, blue line, tremor, basophilic degeneration of the red cells, pallor, and anæmia. 2. An early diagnosis of plumbism can be established by the history of lead working, by the presence of constipation, plus one or more of the cardinals; fine tremor, blue line and basophilic degeneration of the red cells. Constipation with pallor and anæmia or with colic presents a suspicious picture which must be worked out with subsidiary findings. 3. Anæmia and fine tremor are very early signs of plumbism. 4. As more lead workers suffer from vague abdominal pains and gastric disturbances than from colic, the differential diagnosis of any abdominal pain or colic or digestive disturbance demands the consideration of lead as the possible cause. 5. There does not seem to be a consistent rise in blood pressure in acute or subacute cases of lead poisoning. 6. Over one-third of house painters show signs of plumbism. The high incidence of nephritis, arterial disease, and pulmonary tuberculosis in this occupation must be emphasized.—*American Journal of the Medical Sciences*, December, 1918.

(We have been moved to present the above because of the occasional admission to Hahnemann Hospital Wards of cases of a typical lead poisoning, the symptoms that induced the patient to come to us being suggestive of some surgical disease of the abdomen, as appendicitis, cholecystitis, obstruction, etc. Thus far we feel that we have kept clear of diagnostic errors in this direction; but we believe that we have done so only by cooperation of the staffs of the surgical, pathological, and medical departments.)—*Bartlett.*

The Opaque Meal versus the Stomach Tube in the Diagnosis of Gastric Hypomotility.—I. M. Levy, Prof. of Medicine in Syracuse University, after studying over 1000 cases with the idea of determining the above question reaches the conclusion that the stomach tube is the better means of determining the existence of gastric retention. Herein he is at variance with Carmen and Miller, of the Mayo Clinic.—*American Journal of the Medical Sciences*, December, 1918.—*Bartlett.*

Effect of Ground Glass on the Gastro-Intestinal Tract of Dogs. —From time immemorial, as the school boy essay goes, we have heard of the terribly poisonous effects of ground glass, and many are the gruesome stories told by the laity to substantiate the superstition. We have several times looked up literature to find out, if we could, just how much there was in the story other than the damage done by mechanical action. Drs. Simmons and von Glahn, of Fort Sam Houston, Texas, have made a personal investigation of the subject by feeding ground glass to dogs. Like ourselves they had always felt skeptical on the subject, and likewise had been unable to find any confirmatory literature. As the result of their feeding experiments, they have reached the conclusion that the ingestion of ground or powdered glass has no toxic effect and produces no lesion either gross or microscopic on the gastro-intestinal tract of dogs.—*Journal of the American Medical Association*, December 28, 1918.—*Bartlett.*

Relationship of Syphilis to Abortion.—Adair (*American Journal of Obstetrics*, November, 1918) has analyzed the records of 1095 patients in the obstetric service of the University of Minnesota Hospital from the stand-

point of the relationship of syphilis to abortion, miscarriage and fetal abnormalities. He concludes that this disease is perhaps not such a frequent factor as has been generally supposed. He summarizes his work as follows:

1. There were 1095 cases in whom there were a history of 2773 pregnancies, of which 2422 ended at term.

2. There were 109 cases who had 197 abortions in a total of 621 pregnancies or approximately one abortion to three pregnancies.

3. In the non-syphilitic and negative Wassermann group there were 83 cases with 142 abortions in 464 pregnancies, or about one to three.

The 13 syphilitic cases had 23 abortions in 74 pregnancies, or about one to three. Apparently syphilis is not a very potent factor in producing the termination of pregnancy during the first trimester.

4. There were 40 cases who had 62 miscarriages in a total of 202 pregnancies, or about one to three..

There were 30 cases without evidence of syphilis in whom there were 49 miscarriages in 161 pregnancies, or nearly one in three. In 7 cases with indications of lues there were 10 miscarriages in 27 pregnancies, or a little more than one to three. This indicates that syphilis is not responsible for any high percentage of miscarriages.

5. When we consider the premature births in this series we find about one-third of the mothers giving evidence of syphilis. About 20 per cent. of the premature infants give positive evidence of luetic infection.

6. About 10 per cent. of the mothers who had stillbirths gave positive Wassermann reactions. Of the stillbirths in the hospital 12 per cent. were proved syphilitic.

7. Two of the malformed infants (out of 16 malformations born to 15 mothers) were from syphilitic mothers. This is a higher ratio for those having syphilis than for those who did not.

8. Syphilis was proved in 2 out of 5 cases of hemorrhage of the new-born.

N. S. Betts.

210 Fibroid Tumors Treated by Radium.—(Kelly, *Surgery, Gynecology and Obstetrics*, October 1918.) Even with the modern perfected technique of hysteromyomectomy which has made the operation in skilled hands one of the safest of our major procedures it is followed in a considerable proportion of cases by protracted convalescence, post-operative suppuration, adhesions, hematomata, infections of the cervical stump, ventral hernia, prolapse of the vaginal vault and cardiac embolism. Kelly declares that the radium treatment has favorably affected almost every uncomplicated fibroid of whatever size in his series of 210 cases. There was no mortality causally associated with the treatment and 21 of the patients could not have been operated on without great danger owing to serious systemic complications. Cases excluded from radiation were:—

Ovarian cyst	9
Appendicitis	7
Big tumor, intra-uterine radiation impossible	6
Severe pain	5
Adhesions	4
Operation preferred	4
Myomectomy to preserve possibility of conception	2

Gall stones	2
Pelvic inflammatory disease	2
Cæsarean section	1
Right inguinal hernea	1
Prolapse	1
Extra-uterine pregnancy suspected	1
Total	45

(Kelly seems to have been unusually fortunate in having such a relatively small number of complicated cases in his series.—*Ed.*)

Where there is a doubt about the diagnosis, operation is to be elected as preferable to radiation.

Where sub-mucous fibroids obstruct the canal and prevent the ready introduction of the radium into the uterine cavity a different plan must be employed from that used in a case with a patulous cervix. Where a sub-mucous fibroid is sloughing and others are present, it is advisable first to remove the sloughing growth vaginally and then to treat the remainder by radium. Where a return of menstruation is desirable, it is important to locate the ovaries and to protect them during the treatment. It is best to produce an amenorrhœa which shall last until the fibroid is gone. It is not uncommon to see the tumor begin to grow again when menstruation is not stopped.

As a rule, a single intra-uterine dose of 1500 millicurie hours is sufficient to produce an amenorrhœa and shrinkage or complete disappearance of the tumor. An equal effect is produced by radiation with a gram of radium, at a distance of 4 inches from the skin, distributed at various points over the tumor for 24 hours. Either of these methods may be selected, or they may be advantageously combined. The amenorrhœa usually lasts from a few months to 2 years; in some it is not secured and in some it is permanent.

A preliminary curettage should be done, to rule out malignancy (? Ed.) and to remove any polypi. Calcified fibroids, which are naturally not responsive to treatment, can be excluded by an X-ray examination, desirab in all cases.

At least seven weeks should pass before a second treatment, and it should be omitted if amenorrhœa is already secured. Usually the second treatment should be an external one. While some fibroids show a marked decrease in one or two months, others disappear much more gradually. To cause complete disappearance and to maintain amenorrhœa it is important that treatments should be given at intervals of three or four months.

N. S. Betts.

A Simple and Expeditious Method of Performing the Abdominal Incision.—(Bland, *Surgery, Gynecology and Obstetrics;* January 1919.) Bland describes a technique for opening the abdomen which has been used by himself and Montgomery for the last three years. It has the advantages of speed and simplicity, no instruments being used except the knife and the hands of the operator and his assistant.

The technique is as follows:—Two square mops are folded upon themselves. One is interposed between the fingers of the left hand of the surgeon and the skin of the patient on the left side and the other is interposed between the fingers of the right hand of the assistant and the skin of the patient on

the right side. Pressure is made downward and outward in order to render the skin tense. A free incision of desired length is then made through the skin, superficial fascia and fat down to the aponeurosis. The fingers of the surgeon and his assistant then slide over the margins of the incision having the gauze still between the skin and their thumbs. The outer layers are then grasped between the thumbs and fingers and lifted upward. The aponeurosis is then incised. The recti muscles may be separated in the mid-line or either muscle split in the line of its fibres. When the separation of the muscle is accomplished the fingers of the surgeon and his assistant slip underneath the separated fibres and raise the layers of the abdominal wall. This at the same time lifts and makes tense the peritoneum which can now be readily incised without any danger of injuring the underlying structures.

N. S. Betts.

Recurrence of Stone in the Kidney.—C. R. Robins (*Surg. Gyn. & Obstet.*, 1918, xxvii, 270) reports four cases of recurrence of stone in the kidney after operation under treatment at the same time. In the first, the kidney had been removed for a calculus following infection, and the remaining kidney became infected about a year later and a stone formed. In the second case, a stone was removed and the infected kidney drained. The kidney became normal; but within a month the other organ became infected and a calculus formed. The third patient, who had a horse-shoe kidney, rapidly developed stone in various portions of the urinary tract on both sides. The fourth patient, after each of two pyelotomies, had a recurrence of the calculus in the same location. From a study of these and other cases reported in medical literature, the author concludes that recurrence takes place more frequently than is believed. He thinks that even when there has been a recurrence of the stone, the patients may remain in comparatively good health. He believes, however, that the stone should be removed, if good reasons for this exist, but he makes a plea for further study in regard to the causes of the formation of calculi, in order to prevent recurrences.—*L. T. Ashcraft.*

Calculi in Immobilized and Well-Fed Patients With Genito-Urinary Infected Wounds.—In connection with the paper of Robin, it is interesting that F. Cathelin has published in the *Rev. gen. de clin. et de therap.*, Paris, 1918, xxxii., 482, a paper on the subject of Calculi in Immobilized and Well-Fed Patients with Genito-Urinary Infected Wounds. In such patients, he noticed, after a long period of hospitalization, sudden attacks of renal retention with nephritic symptoms. There was usually fever, and the general condition of the patient was bad. The attack commonly lasted from eight days to three weeks, being terminated by the passage of the calculi and the discharge of pus. The author attributes the stone formation in these cases to the long continued lack of exercise with the ingestion of a great deal of mineralized food.—*L. T. Ashcraft.*

The Management of Subparietal Injuries of the Kidney.—J. M. Mason (*Surg., Gyn. & Obst.*, 1918, xxvii., 277) advocates an earlier resort to surgical measures in such injuries, before grave symptoms develop. The concealed injury may be a contusion, a slight laceration of the kidney substance, or a complete rupture of the organ. It may involve the kidney only, or may affect neighboring organs. The author considers early exploration

the proper course in every case in which it is not contra-indicated by severe shock or complicating injuries. He does not approve of expectant treatment in any case, and reserves late operation for such cases only as are not seen early or in which shock or complications necessitate delay. He thinks that the danger of early exploration, if the case is properly handled, is very slight as compared with that of expectant treatment. The former enables one to determine promptly and definitely the nature and extent of the injury, and to institute at once appropriate treatment to control hemorrhage, avoid infection and secure drainage. In favorable cases of ruptured kidney, suturing may be done successfully, or the organ may be packed and drained; while in cases in which the renal substance is hopelessly damaged, the prompt removal of the kidney will materially lessen the period of convalescence.—*L. T. Ashcraft.*

Traumatic Nephritis.—Widholz (*Correspondenz-Blatt fur Schweizer Aerzte*) considers it difficult to make an absolute diagnosis of traumatic nephritis. When a healthy person receives an injury to the kidney and renal elements appear in the urine, if there is a constitutional reaction like that accompanying nephritis, the physician is justified in making a diagnosis of traumatic nephritis. Should, however, high blood pressure and a dilated heart be discovered after the injury, the nephritis is not traumatic, but is merely an old condition that has been aggravated by the injury; because more time will be required for such sequelæ to develop. A bruise over the kidney may produce some mechanical irritation, causing desquamation with a leakage of albumin and slight bleeding, but this condition is merely transient, and ought not to be considered traumatic nephritis. The author does not approve of the use of this term except in cases in which the injury solely and immediately causes a renal sediment.—*L. T. Ashcraft.*

Hypertrophy of the Prostate—L. Sexton (*Interstate Medical Journal*) recognizes three clinical varieties of hypertrophy: Adenomatous, fibrous and malignant. He states that the first produces the greatest enlargement and the most obstruction, usually necessitating removal of the gland. The malignant type constitutes about ten per cent. of the cases. There are a number of causes for this condition, among which are, sexual excitement, age, infections, stone in the bladder and other irritations. When the tumor grows up under the mucous membrane of the bladder, a pouch containing residual urine is formed. This is often the seat of a commencing cystitis. Owing to the straining to get rid of the residual urine, thickening of the bladder muscles occurs at first. Afterwards, however, they may atrophy on account of the continuous dilatation of the bladder. The ammoniacal decomposition of the urine produces a constant desire to urinate, especially at night. The distention of the bladder wall may cause it to lose all of its propulsive powers. As the result, a catheter life becomes necessary. The use of the catheter by the patient, no matter how well he may be instructed, often leads to infection. While patients suffering from this and other complications may seem unfavorable for operation, yet the surgical procedure drains the infected bladder, relieves the pain and back pressure from the ureters and kidneys, and gets rid of the residual urine, pus, and stone, if present. Rest in bed and attention to the diet should precede operation, which should usually be performed in two stages. At the first operation the bladder may be opened and a drainage

tube inserted, through which it can be irrigated with hot boric solution. Later, when the septic condition is overcome and the congestion in the kidney has subsided, the prostate can be removed. It can usually be easily shelled out with the finger.—*Leon T. Ashcraft.*

A Unique Case of Prostatic Abscess.—G. Frank Lydston (*Southern Medical Journal*) reports the case of a man seventy-two years old who, ten years previously had begun to have frequency of urination. Three years later, he had had a fall upon the buttocks. Retention of urine developed, and during the next seven years normal evacuation of the bladder was impossible. Double epididymitis developed two weeks before consulting the author, with marked swelling caused by acute hydrocele on both sides. The patient had frequent recurring chills and rises of temperature. On rectal examination, there was seen what appeared to be a very much enlarged prostate. There was no fluctuation. Suprapubic section was performed, the intention being to do a prostatectomy later. No enlargement of the lateral lobes was present; but extending upwards from the prostato-vesical orifice was a large, semi-elastic tumor, about x 5 cm. in width and 4 in thickness. The tumor was regarded as adenomatous. A week afterwards, when the patient was made ready for prostatectomy, the swelling of the scrotum and its contents was so great that the presence of pus was suspected. On making an incision, a large quantity was revealed on each side. The tunicæ vaginales were drained and packed with gauze. When the bladder was opened, it was found to have a perfectly normal neck; and no tumor whatever was present.—*Leon T. Ashcraft.*

Perineal Prostatectomy.—J. Crawford (*Journal of the Iowa State Medical Society*) thinks that all patients on whom prostatectomy is contemplated should be kept under observation and receive preliminary treatment for at least a week. During this period, the cystoscope should be used to determine the character and location of the obstruction; likewise to note the presence of stone or tumor in the bladder. Crawford prefers nitrous-oxide-oxygen for anesthesia. The author describes the operation which consists in making an inverted V-shaped incision in the perineum from below the bulbous urethra to the inner sides of the ischial tuberosities, splitting the fascia and opening up the peri-rectal fossæ on both sides. The apex of the incision is then completed, the central tendon is cut and the recto-urethralis muscle is gently dissected from the membranum urethra. The urethra is now split just in front of the prostate. The sound in the urethra is withdrawn, and the prostatic tractor is inserted into the bladder through the incised urethra. The prostate is pulled forward, and the fascia covering it is cut close to the urethra and pushed backward. The prostatic capsule is now well in view. Frequently the organ can be brought nearly to the skin margin. An incision is made on each side of the gland, and through these incisions the hypertrophied lobes are enucleated. Drainage tubes are inserted, the wound is packed with gauze and the incision is closed. The special point that Crawford makes in regard to this operation is that it is extra urethral, instead of intra urethral. In this procedure, there is no anatomical structure injured or removed, the entire field is clearly seen, and there is very little bleeding. Another advantage is that there is very little shock.

—*Leon T. Ashcraft.*

Prostatic Enucleation.—L. Rosenwald (*Jour. Mo. State Med. Ass'n*) states that in the prostatic case the urine always becomes infected, sooner or later. Cystitis is then added to the other condition. There are many kinds of prostatic tumors, the fibro-adenoma being the most common. The author considers operation the only proper method of treatment. He prefers the suprapubic route, doing the cystotomy under local anesthesia; while the prostatic enucleation is performed under spinal anesthesia. A detailed account of both operations is given.—*Leon T. Ashcraft.*

The Prostate Question.—S. R. Woodruff (*Journal of the Medical Society, N. J.*, 1918, XV, 263) considers the question from the standpoint of necessity for operation; diagnosis; differentiation of diverticulum, tumor, tabetic bladder or calculi; and necessity for cysto-urethroscopy. Carcinoma may usually be excluded by the character of the rectal touch. The stony, flat, fan-shaped mass, commonly smaller than the usually enlarged gland, forms a better means of diagnosis than either hemorrhage or residual urine. A large amount of the latter, even if not infected, is a serious hindrance to the cure of a case, because it indicates a dilated and atonic bladder and dilated ureters, with some hydronephrosis, compression and absorption. Prior to operation, the examination consists of urea nitrogen, uric acid and creatinin for retention; and frequent phenolsulphonephthalein tests for the variation of renal function. Woodruff states that more than 5 mg. of creatinin per 100 c. cm., and less than 25% for two hour phthalein output are very unfavorable signs. Hygienic and dietary measures, removal of residual urine and cystitis by daily catheterization, the inlying catheter or suprapubic cystotomy with irrigations, will put the patient in proper condition for enucleation. The two stage operation should be performed; but whether the enucleation be done by the suprapubic or the perineal route is merely a question of personal preference.—*Leon T. Ashcraft.*

Ringworm Epidemic Presenting a New Type of Fungus.—S. N. Paul describes an interesting epidemic of ringworm in New South Wales resulting from a plague of mice. The mice advanced rapidly and left in their wake great destruction and devastation. Their supply of food was obtained from large quantities of wheat which had accumulated owing to the lack of transportation facilities. As a result of their invasion upon this food supply large quantities of the wheat had to be rebagged, necessitating rehandling, and many of the workers became infected with ringworm. Many of the mice were seen with denuded patches of hair and there was ample evidence that they were responsible for the spread of the disease. The eruptions occurred principally on exposed parts and the hairy region of the face. In the case described by Paul the forearms were the parts involved. This patient gave a history of having handled wheat two and a half months previous to the appearance of the infection. Upon first appearance it resembled gooseskin without any redness, but later erythema manifested itself and the lesion spread in the customary circular manner. The patient complained of pruritus which was more noticeable at night. Lesions showing various stages of development were present, the patches being rounded and sharply circumscribed. The more advanced patches bore a somewhat striking resemblance to chronic eczema. In these lesions the periphery was not sharply circumscribed. Upon soaking the scales in liquor potassae, the fungus was abundant-

ly found. On the fifth or sixth day there could be seen fine radiating hyphæ. On the eighth day there was a somewhat slightly raised central knob and the purple lake color was then present. On the tenth day a creamy white powder commenced to make its appearance on the surface, coming from the center of the lesion. A few weeks later plemorphism developed. An examination of the fungus showed it to be one of the microid ecto-endothrix trichophytons of the Gypseum. The author, being unable to find the description of any such fungus in the literature, believes he has discovered a new fungus which he names Trichophyton rodens.—(*Med. Jour. of Australia*, December 15, 1917.) *Ralph Bernstein.*

Scalp Diseases and Hats.—After Manheimer directed attention to the danger of hats as a means of transmission of infection, a study of infections traceable to this source was made. Salesmen in hat shops were questioned and it was found that approximately 2 per cent. of all customers had eruptions on either the face or forehead. It was learned that an average of four hats were tried by each customer before a purchase was made. The hat bands were never changed unless they became very much soiled. Some stores made a practice of using a machine for taking an impression of the prospective purchaser's head by placing it directly over the bare head. In only a few shops did they use a paper cap as a protective layer between the scalp and the machine. The danger of transmission of scalp diseases by the trying on of hats is negligible compared with the chances taken by one in getting his hair cut. Acne and rosacea are the eruptions most commonly found upon the face, neither of which is contagious. Adults are never attacked by ringworm of the scalp; favus is exceedingly rare, and while old syphilitic lesions and even ulcers are common in the scalp, the danger of transmission would be small unless the lesion were a chancre.—*Med. Record*, Oct. 6, 1918.

Ralph Bernstein.

Treatment of Leprosy with Sodium Gynocardate.—Sir Leonard Rogers, the originator of the treatment of leprosy by intravenous injection of sodium gynocardate, during the past year received five reports in connection with the employment of this method in a total of eighteen cases, showing that one case became worse under treatment; that no change occurred in three; that one case was improved and that seven were greatly improved. Dr. Spittel, of Columbo, reports one case unfavorably, but states that the violent sequeles he encountered were perhaps due to the large doses given the patient, some of which he claims were larger than any used or advised by Sir Leonard Rogers. Rogers has continually warned against the possible danger of the spread of the disease through the system by a drug which has the power of softening the tubercles and breaking up the bacilli, and has strongly urged extreme caution in the intravenous use of the drug. Dr. Carthew, of Siam, reports his best results as obtained from the combined use of oral and intravenous methods as advocated by Rogers.—*Indian Med. Gaz.*, 1918, p. 97. *Ralph Bernstein.*

Intramuscular Injections of Sodium Gynocardate in Leprosy.—Percy M. Peacock, of Mandalay, reports five cases treated during the year 1916-17 with sodium gynocardate injections. The cases reported represent only those patients who persisted in the treatment, as owing to the fever,

swelling or pain incident to the injections, the majority of the natives could not be induced to continue treatment.

The method employed is the hypodermic and intramuscular injection. No intravenous injections were given. The injections were given three times a week, the dosage rapidly increasing to the full amount that the patient could stand. As many tablets as could be taken were given by mouth on non-injection days. The calves, front of the thighs, buttocks, forearms and deltoids were injected regularly in turn, each site being allowed plenty of time to recover before being again injected. An approximate total of 600 injections were given during the time mentioned and 24 grains into the gluteus was the largest single dose. The treatment was divided into periods—injections three times a week were given for three months with tablets by mouth on non-injection days. Then for a month no injections were given but tablets were orally given each day in increased doses. Peacock found that if the injections were carried into the fourth month the patients seemed to become pale; there was loss of weight and they complained of a tired feeling.—*Indian Med. Gaz.*, March, 1918. *Ralph Bernstein.*

Commissural Smoker's Patches.—Buccal mucous membrane leukoplasia is ordinarily attributed to either one of two causes—excessive smoking or syphilis. Some Frenchmen claim it has always been due to one, some to the other cause, whereas others believe it is the result of the combination of both factors. Bonnet, in discussing the problem, limits himself to the triangular patch of leukoplakia occurring at the commissures with its apex posteriorily. Fournier described this particular type years ago and he definitely stated that it was not due to syphilis. Bonnet has observed 21 cases of these triangular patches in a series of 80 cases of primary syphilitic infection in young soldiers. He likewise observed in another series of 74 cases of secondary syphilis in various stages 21 cases of this leukoplasia. As there was no constant association of smoking with these patches, it is Bonnet's conclusion that neither syphilis nor smoking will explain their origin.—*Ann. de la dermat. et de syph.*, p. 597, 1918. *Ralph Bernstein.*

Oil Dermatitis in Munition Workers.—Thibierge describes pustular follicular dermatitis as making its appearance on lathe workers in munition plants in the form of a pustule 2 to 8 m.m. in diameter, rather firm and containing thick pus. These pustules are surrounded by an inflammatory reaction which gradually disappears. A black spot, more or less punctiform, in the pilosebaceous orifice, which cannot be evacuated, is a characteristic of these pustules. The lesions are found upon the exposed parts of the body, more particularly on the hands and forearms, in both sexes, and also on the anterior internal surface of the thighs. It is Thibierge's belief that the eruption is largely due to the low grade of oil now in common use, and that the black spots are caused by the accumulation of fine metallic particles, chiefly iron.—*Bull. de l'acad. de med.*, March, 1918. *Ralph Bernstein.*

Chancre of the Eyelid.—Shäffner reports a case developing in the lower left eyelid of the mother of a young woman who had a marked involvement of the buccal mucous membrane. The chancre followed an attempt by the daughter to remove a foreign particle from her mother's eye by using the tip of her tongue.—(*J. A. M. A.*, March 9, 1918.) *Ralph Bernstein.*



COL. JOHN ALEXANDER LOCKWOOD, U. S. A. (Retired)

THE HAHNEMANNIAN MONTHLY.

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STUDENTS' ARMY TRAINING CORPS, HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA.

COL. JOHN ALEXANDER LOCKWOOD, U. S. A.,
CAPT. WM. HENRY FRAZEE,
Commanding Officers.

AN APPRECIATION, BY RALPH BERNSTEIN, M.D.,
Secretary of the Faculty of the Hahnemann Medical College of Philadelphia.

On October 1st, 1918, the Students' Army Training Corps of the Hahnemann Medical College of Philadelphia, came officially into existence, and on December 16th, officially went out of existence.

Two and a half months of army life and training was the lot of our students; that it did them a lot of good physically there is no doubt; how much medicine they learned during that time, is a question.

Barracks life at the First Regiment Armory will give our students something to think about for many a day. Their experiences were many and varied. How much studying they did, no one will ever know, except, perhaps, the students themselves; how many pranks they played on one another and the officers, as well, they surely know; perhaps the officers don't know, and it is just as well that they don't.

However, the S. A. T. C. days are all over now, and once more our students are back at their daily routine of studying medicine and preparing for the same; and from all accounts, they are mighty happy and contented to be back in their old sphere of college life.

To Col. John Alexander Lockwood, U. S. A. (Retired), goes the credit for having organized the unit, and to Capt. William Henry Frazee we give credit for having so ably carried on the work begun by Colonel Lockwood.

To be liked by one's fellowmen and appreciated by them is fine, but to be loved and exalted by them, is divine, and the students of the Army Training Corps of the Hahnemann Medical College of Philadelphia sure did love Colonel Lockwood.

His genial smile, his beaming countenance, and his military bearing shall always be with us; always stern and just on the military side, but kind and sympathetic on the human side, he immediately won the hearts and the respect of the entire student body.

Colonel Lockwood's ability as an organizer of the military side of Old Hahnemann manifested itself at once. Always anxious to please and being fond of harmony, both in the ranks, and among the Faculty and Board of Trustees, he soon had things running smoothly, without the slightest friction.

Considerate always of the rights of the civilian faculty as well as the rights of the Student Corps, Colonel Lockwood had the rare ability of being able to adjust things to meet the existing situation quickly and satisfactorily, and with but little means at hand to accomplish such an end.

Colonel Lockwood was particularly adapted to assume command of a teaching institution, because of his long experience in military work at educational institutions and universities which were under military control; he seemed to realize at once that a medical college was a different sort of college, and that the military side would have to dovetail in with the minimum of interference with medical studies, and he did, and in a way which soon won the admiration of the Faculty and the Board of Trustees.

Colonel Lockwood was held in such high regard and esteem by the Faculty that he was given a testimonial dinner at the Adelphia Hotel as a farewell parting on his leaving Old Hahnemann, and it was with much regret indeed, that Hahnemann had to part with such a lovable and efficient commanding officer.

Colonel Lockwood was also the guest of honor at a dinner given by Dr. H. Eberhard at the Union League, at which

time the Board of Trustees had the pleasure and honor of becoming better acquainted with the Colonel, and the occasion was indeed an enjoyable one.

The student body were not to be outdone by either the Faculty or the Board of Trustees, because they, too, must show their sense of appreciation of their commanding officer, so that they presented him with a handsome humidor, upon which was a silver plate with the following inscription: "To Col. John A. Lockwood (Retired), Commanding Officer, Students' Army Training Corps, Hahnemann Medical College, Phila.—In Honorarium—From the Student Body—As a token of appreciation of his many acts of kindness, his wise counsel, and the personal interest which he had manifested toward the entire Corps, and as a tribute to the high regard and esteem in which he was held, by the entire student body of the S. A. T. C."

Col. John Alexander Lockwood was born in Europe (of American parents, traveling abroad) on October 30, 1856.

Coming to America, at an early age, he spent most of his boyhood in Minnesota and Maryland. His education, for the most part, was obtained at government schools. He graduated from United States Coast Guard Cadet Schoolship Chase in 1879, after making two cruises to European ports.

The following year he was appointed to the United States Army as a lieutenant in the Seventeenth Infantry, and went to the Fort Leavenworth Infantry and Cavalry Army School, graduating from there in 1883. He served with his regiment on the frontier in the States of Wyoming, the Dakotas and Montana. He participated in the campaign against hostile Sioux Indians in South Dakota, in 1890-91, receiving a War Department Service Medal on this account.

In 1891, having been transferred to the Fourth Cavalry, his duty took him to the State of California, where his regiment was engaged in patrolling the National Parks. This patrol duty consisted in protecting the parks from the depredation of sheep and cattle and from forest fires, in addition to which the troops were kept busy building roads, repairing trails and stocking the mountain streams with trout.

In 1898, the year of the Spanish-American War, Captain Lockwood, who received his promotion that year, was engaged in "mustering" three regiments of Mississippi Volunteers into the United States Army. The following year, in the spring

of 1899, he accompanied his regiment to the Philippine Islands.

In the campaign against the insurgents in the Philippine Islands, which followed the Spanish-American War, Captain Lockwood commanded M Troop, Fourth Cavalry, and participated in a number of small affairs and skirmishes. He received a Service Medal from the War Department for that campaign (known as the Lawton Expedition in Northern Luzon).

On account of illness contracted in the Philippine Islands, Captain Lockwood was ordered home, spending some time in Japan, en route to the United States. After reaching the United States he was retired from active service, at his own request, after twenty years' service. Since his retirement from active duty, Colonel Lockwood (promoted after retirement) has been engaged for the most part in educational work at military colleges and universities. While at Fordham University, New York City, he was a lecturer, under auspices of the Board of Education of New York; his lectures being on the subject of the Philippine Islands.

He is the author of a small handbook for Military Cadets.

In the spring of 1917, when the United States was about to enter into the World War, (then) Major Lockwood was sent by the War Department on a mission to the West Coast of South America, via the Panama Canal, on an army transport.

Colonel Lockwood, promoted in 1918, was one of the field officers at the recent Camp for College Students at Plattsburg, New York, and while there received orders to report as Commanding Officer of the Hahnemann Medical College Unit, for duty in September, 1918.

Colonel Lockwood is a member of the Army and Navy Club of the City of Washington, and of the New York Athletic Club.

He is a member of the following societies: Order of Indian Wars; Loyal Legion; Sons of the American Revolution.

It was unfortunate for Captain Frazee that he had to take charge of the unit at a time when the students and Faculty alike had just become accustomed to the routine as established by his predecessor, which put him at a decided disadvantage.

It did not, however, take Captain Frazee long to size up the situation and in a very short time he had things running just as smoothly as ever; Captain Frazee was a strict disciplinarian, which goes with army life, and it did not take him long to set to rights the relaxation which would naturally take place on the change of commanding officers.

Captain Frazee was fond of our student body and did everything possible to make barracks life pleasant for them. Several dances were held for the students, which were followed by "eats." Captain Frazee always seemed to know where to get free music and "feed" for these occasions, which were always enjoyable and for which the corps were always doubly thankful.

While Captain Frazee was fond of discipline, he still had a warm spot in his heart for those in trouble and always tempered his justice with mercy. We shall always remember Captain Frazee because he was strict and he was just.

Capt. William Henry Frazee was born December 4, 1877, in the city of Camden, Camden County, N. J. He received a common school education and started to work for the Erie & Western Transportation Co., an adjunct of the Pennsylvania Railroad Co. At the age of fourteen he was transferred to the Passenger Receipts Dept., in 1896, and to the Purchasing Agents' Dept., 1899. He will return to this department at the expiration of his leave of absence, granted to enter the service of the United States Army.

Captain Frazee started his military career at the age of twelve, an organization being formed for youngsters under the auspices of St. Paul's P. E. Church, called the "Do Not" Society, afterward better known as the "Springfield Guards," under the command of Capt. John A. Mather, Jr., an able and efficient officer, who prior to his death had advanced to Brigadier General. As soon as he became eighteen Frazee enlisted in Company G, 6th Regiment, National Guard of New Jersey. This company was ordered out at the outbreak of trouble with Spain, becoming Company M, 3rd Regiment, N. G. N. J., Vol. Inf., with which outfit he served as Corporal, Sergeant and First Sergeant; when mustered out again, went into his old company, then known as Company M, 3rd Regiment, N. G. N. J. Served as First Sergeant, elected to First Lieutenant, then elected Captain. This position he held until pressure of other duties caused him to resign in 1914. He was, however,

still interested in military affairs, as he was Instructor of the Jamesburg Reform School for some time and later established military at Blair Academy, Blairstown, N. J., which kept him from entering the service sooner than August, 1917, when he received an order to report at Fort Myer, Va., R. O. T. C., and received a commission as Captain Infantry in the Reserve Corps and placed on active duty at Camp Meade, Md., serving in the 154th Depot Brigade, in command of the 12th Company. On June 27, 1918, ordered to Philadelphia as Commanding Officer of the Spring Garden Inst. Training Detachment, and November 14th, ordered to assume command of the Hahnemann Medical College Students' Army Training Corps in addition to other duties, in which capacity he was serving when honorably discharged.

Colonel Lockwood and Captain Frazee were very fortunate in having an able staff of assistants, who, like the student body, at once became devoted and attached to them and left no stone unturned to make their stay at Hahnemann a most pleasant and successful one.

The staff consisted of Lieut. Samuel J. Hughes, Personnel officer; Lieut. Harold A. Donegan, Adjutant, and Lieut. M. Berkman, Quartermaster.

Lieut. Samuel J. Hughes was born in Miamisburg, Ohio, December 27, 1888, and was educated in the public schools. He was graduated from the Miamisburg High School in 1905.

For some unaccountable reason he was sent to the Heidelburg University (Tiffin, Ohio) to prepare for the ministry, but gave it up after two years of study. Later he graduated from the Miamisburg Commercial College, and Bowling Green Business University (Kentucky).

For a number of years Lieutenant Hughes was connected with the Red Wing Milling Company, of Red Wing, Minn., and in 1914 began his teaching career as a music teacher in the township schools near Dayton, Ohio. Prior to entering the service of the U. S. he was a commercial teacher in the Pittsburgh High Schools, and left Pittsburgh to attend the last camp at Plattsburg, N. Y., where he received the commission of Second Lieutenant and was assigned as Personnel Officer to Hahnemann Medical College.

Lieutenant Hughes soon won the admiration and respect of the student body, because he was "one of the boys" and because he was a keen student of human nature, which at once

gave him the ability to immediately "understand" the peculiar workings of the student mind.

Lieut. Harold A. Donegan was born September 24, 1896, in New York City. He was educated in the public schools, New York City, Townsend Harris Hall of the College of the City of New York, and the Fordham University School of Law. While a student at the latter school he entered the training camp at Plattsburg, N. Y., and on September 16, 1918, was commissioned a Second Lieutenant of Infantry. He was an Adjutant, Temple University S. A. T. C., from September 26, 1918, to October 16, 1918. On October 16, 1918, he became Adjutant, Hahnemann Medical College S. A. T. C., and held this position until his discharge from the army. Since discharge he has been employed in the Bureau of Law and Adjustment, Finance Department of the City of New York. He is continuing the study of law.

Lieut. Moses Berkman was born on December 25, 1896, in Hartford, Conn. He is a graduate of the public and High Schools of Hartford. He spent two years at Trinity College, Hartford, before he went into active service. At college he was a member of the Reserve Officers' Training Corps for one year and a half. He was then sent to Plattsburg Training Camp in June, 1918, and underwent a three months' training course of instruction.

Lieutenant Berkman received his commission as Second Lieutenant in September and was immediately assigned to the Hahnemann Medical College for duty in the Students' Army Training Corps.

Both Lieutenants Donegan and Berkman were well liked by the entire student body because they were students themselves and at once appreciated the situation which confronted them. They never did assume an over-bearing military attitude, which at once won the good will of all.

Long live our Colonel Lockwood and Captain Frazee, and their able staff; a cordial welcome awaits them always at Old Hahnemann, and during the long years to come we shall have nothing but pleasant thoughts of our associations with them, and many keen regrets of the parting.

HISTORICAL RETROSPECT.

BY

WALLACE MC GEORGE, M.D., CAMDEN.

(Read before the New Jersey State Homœopathic Medical Society, at Asbury Park, on its Jubilee Meeting, June 1, 1918.)

On this memorable occasion, when the New Jersey State Homœopathic Medical Society meets for the fiftieth year since its reorganization—its Jubilee—it is well to look backward and take a retrospective view. Of all the members that attended the meetings in 1868, Laban Dennis, E. R. Laine, John Younglove, and the writer, survive.

April 10, 1844, Dr. Isaac M. Ward, of Newark; Dr. I. C. Boardman, of Trenton, and Dr. Walter Ward, of Mount Holly, three of the founders of this society, met with Homœopathic physicians from several States, in New York City, and organized the American Institute of Homœopathy. This was three years before the American Medical Association was formed.

At Mount Holly, in 1847, six homœopathic physicians met and organized the New Jersey branch of the American Institute of Homœopathy. John Richardson Andrews was chosen president, and his associates were Drs. Walter Ward and Morgan J. Rhees, of Mount Holly; Drs. I. D. Moore and R. S. Middleton, of Burlington, and Dr. I. C. Boardman, of Trenton. It was the first organization for the advancement of homœopathy in this State, and preceded the birth of our society seven years. Its proceedings were published in an eight-page pamphlet. Dr. Purnell W. Andrews, son of Dr. I. Richardson Andrews, considered these proceedings among his choicest possessions, but unfortunately since his death they cannot be found.

At that time, and for some years later on, no one who was suspected of being a homœopath, or even had investigated homœopathy, could secure a license to practice in this State. If he did undertake to follow his profession without a license, he was liable to arrest, and a fine of $25 for every prescription he had made, and having no legal standing, could not accept nor collect his bills. To add to the unrest, the Faculties of the leading New York and Philadelphia Medical Colleges claimed that a diploma from any of their colleges should be

sufficient evidence of fitness of its holders to practice, and resented the holding up of their graduates until after they were examined and licensed.

Taking advantage of this feeling and assisted by some of the more liberal members of the Medical Society of New Jersey, a few of the homœopathic physicians in West Jersey quietly met and chose Dr. Walter Ward, of Mount Holly, to call on Dr. George F. Fort, the Democratic candidate for Governor in the fall of 1850, and find out how he stood on an amendment to the Act incorporating the Medical Society of New Jersey.

At that time our State was very evenly divided politically. Dr. George F. Fort was a Democrat. Most of the homœopaths were Whigs. Dr. Fort wanted to be elected, and he felt that he needed the support of our pioneers and their friends. He promised Dr. Ward that if the advocates of this amendment would support him, and he was elected, he would sign the bill if the Legislature passed it. The pledge was given, the votes were cast, Dr. Fort was elected Governor, and he promptly signed the bill when it was sent to him for his signature. Mention the Act of 1851 to Dr. Ward, and he would laugh heartily as the memory of his interview with the would-be Governor flashed before him.

The supplement was passed near the end of the session and approved March 14, 1851. The second section of it reads: "It shall be lawful for any person of good moral character, who has obtained a diploma for the degree of Doctor of Medicine and Surgery from the College of Physicians and Surgeons, in the City of New York, the Medical Department of the University of the City of New York, the Medical Department of the University of Pennsylvania, Jefferson Medical College, and the Medical Department of Pennsylvania College in the City of Philadelphia * * * to present such diploma to the President of the Medical Society of New Jersey, together with the testimonials of his good moral character, and the President of said Society shall thereupon, if satisfied with such testimonies, be authorized and empowered to grant a license under his hand and the Seal of the Society, to the person named and intended in said diploma, to practice physic and surgery in the State of New Jersey."

This was the first step in curbing the Medical Society of

New Jersey, and many graduates from these colleges settled in our State.

In 1849, the Homœopathic Medical College of Pennsylvania, now the Hahnemann Medical College of Philadelphia, graduated a class of five, among whom were Daniel R. Gardiner and Ellis B. Keall, both of whom practiced in New Jersey, and by their success in practice made many converts for homœopathy. But the Medical Society of New Jersey would not grant them, nor any of the later graduates, a license to practice their profession in this State.

Again the homœopaths met in conference, this time in Trenton. To Dr. I. C. Boardman, of Trenton, was given the leading part in the drama. He was a good prescriber. He had cured Governor Rodman M. Price of a chronic disease, and was held by His Excellency in high esteem. He was on the ground at Trenton and kept careful watch on the "standing committee" of the Medical Society of New Jersey, whose business it was to examine all bills introduced in the Legislature. On the night preceding the last day of the session, this "standing committee," feeling their work was done, went home to Camden. This was on March 16th.

On the morning of March 17th, our bill was introduced in the Senate and in the House simultaneously. In the afternoon a hearing was given to Dr. Boardman and his associates, who had been called to Trenton that very day. In the evening the bill was passed in both houses, an hour later it was carried to the Governor for his approval, and then, just before midnight, in Dr. Boardman's presence, it was signed by His Excellency, and became a law which emancipated us forever from the yoke of the Medical Society of New Jersey.

Then Dr. Boardman and his associates from East and West Jersey, who had lingered in the State House until the bill became a law, adjourned to the Trenton House, and then and there, in the early hour of March 18, 1854, informally organized our State Society. The men in those days could give us points on how to get a medical bill through the Legislature, and then secure its approval by the Governor.

The Act of March 17, 1854, was a supplement to the Act incorporating the Medical Society of New Jersey, but in reality it took from that society its most valued privilege. It reads as follows:

"*Whereas,* certain practitioners of physic and surgery in this State labor under certain disabilities in the practice of their profession, owing to existing laws, by which they are unable to collect their dues, and are liable to pains and penalties in the pursuit of their profession; therefore

"SECTION 1. It shall be lawful for all persons of good moral character, who have diplomas from any Medical College, or from the Medical Department of any University of any State of the United States, which, before conferring diplomas, require those upon whom they are conferred to be twenty-one years of age, to have studied physic and surgery three full years with a respectable and lawful practitioner of medicine, including two full courses of lectures of not less than twelve weeks each, in which shall be taught the principles of materia medica, pharmacy, chemistry, anatomy, physiology, and the practice of physic, surgery and midwifery, to practice physic and surgery in this State, after depositing a copy of such diploma, translated into the English language, or other evidence of graduation, with the clerk of the county in which such practitioner may reside; and until such copy shall be so deposited, those practitioners who shall neglect the same shall be liable to the penalty of the Act to which this is a supplement; and it shall be the duty of said Clerk to file such copy in his office, for each of which he shall receive twelve and a half cents, and no more, from the practitioners who may deposit the same.

"SEC. 2. All Acts or parts of Acts conflicting with the provisions of this Act be and the same are hereby repealed."

While the homœopaths were jubilant, their opponents in the Medical Society of New Jersey were dazed and mortified, and groaned in spirit at this indignity which had been placed upon them. Those who have read Dr. Godfrey's "History of the Medical Profession of Camden County" know whereof I speak. To those who have not read this book, the following passages will no doubt be interesting:

"This law was passed at the close of the session of the Legislature, and without the knowledge of the Medical Society of New Jersey. It practically abrogated the duties of the censors, diminished the influence of the society and lowered the moral and educational standard of the medical profession in New Jersey." (Page 42.)

But the old Medical Society did not give up hope, and

strived in various ways to undo this wrong to them. In 1858 "The standing committee presented, under instructions, a report as to 'What constitutes a valid license under existing laws,' from Hon. William L. Dayton, who said: 'The supplement of 1854 gives authority to practice medicine in New Jersey under the conditions named in the Act, and obviates the necessity for a technical license from the Medical Society of New Jersey.' With this opinion, the hope of the State Society for a restoration of its chartered privileges, in the examination and licensing of physicians vanished to reappear in the meeting of the American Medical Association in the ensuing May. May 4, 1858, the association met at Washington.

"Failing to repeal or amend the medical laws of 1851 and 1854, the New Jersey delegates introduced a resolution asking that a Board of Censors be established in each Judicial Circuit of the United States Supreme Court, who should examine candidates for membership in the association, and on whose certificate the president of the Association should grant a diploma * * *. The resolution was laid over, under the rules, and never recalled. It was the last act of the Medical Society of New Jersey in opposing unlicensed medical practice, and in 1866 the society voluntarily suspended its censorship." (Godfrey's History, etc., page 50.)

How times and feelings change. Now Homœopaths are solicited to become members of the American Medical Association, and the writer has been an honored guest at a recent banquet of the Camden County Medical Society. We have gone further, and any physician who wishes to investigate Homœopathy, even if a dyed-in-the-wool regular, is eligible to membership in the West Jersey Homœopathic Medical Society. Under this ruling in 1909, a learned and cultured doctor, who has since been elected President of the Medical Society of New Jersey, was proposed and elected a member of the West Jersey Society, and has kindly read a paper before that Society.

From 1858 to 1868 there are no records of any meetings of our society. February 4, 1868, in obedience to a call signed by I. I. Youlin, who was chosen President in 1858, a meeting was held and the society reorganized. The attendance was not large and it was decided to meet again in April, so as to give the graduates from the colleges that spring an opportunity to join the society. On April 15, 1868, the so-

ciety met in Jersey City and several new members were elected. Of all the members elected in these two meetings, but four of them survive—Dr. Laban Dennis, now living in Orange; Dr. E. R. Laine, at Callwell; Dr. John Younglove, of Elizabeth, and Dr. Wallace M. George, of Camden.

Of the twenty-six founders of the society, twelve affiliated with it after reorganization, viz.: Drs. Youlin, Fish, Lafon, Petterbridge, Titsworth, Walter Ward, Wilkinson, Blumenthal, D. R. Gardiner and Vernon.

A few facts about some of the founders may be timely.

Dr. John R. Andrews graduated from the Medical Department of Pennsylvania in 1840, and immediately became interested in homœopathy. He settled in Camden and soon had a large practice. He was a little man in stature, but a giant in will power. To his energy and skill, in great measure, can be laid the success our school has had in West Jersey. He assisted Dr. Boardman greatly in the preparation and passage of the Act of 1854. He was Vice-President in 1855 and 1856, and President in 1857.

Dr. I. D. Arvin practiced in Newark, and he assisted Dr. Youlin in reorganizing in 1868.

Dr. William A. Devine located in Jersey City in 1847, and soon built up a lucrative practice. He was Vice-President in 1855 and President in 1856.

Dr. Thomas Lafon first located in Paterson, but removed to Newark in 1845, and practiced there all his life. He was President in 1855.

Dr. Charles F. Fish practiced in Newark. He was present in 1868, at the reorganization, but never held any of its offices.

Dr. John D. Moore settled in Burlington in 1845 and practiced there till he died in 1868. He was Vice-President in 1856, '57 and '58. He was Chairman of the Committee on Fee Bill and presented his report, which was adopted February 13, 1855. In the little book containing our Constitution and Roll of Members for several years, this Fee Bill is copied in full. We would be glad to get now the maximum fees he proposed, and were adopted there. He was a wonderfully successful practitioner. Some of his patients thought he could bring back the dead, so successful was he in curing patients that had been given up to die by allopathic doctors. He died September 30, 1867, aged 65 years.

Dr. John B. Petterbridge practiced in Paterson, Trenton and Hoboken. During the rebellion he served as an army surgeon. He was our Recording Secretary in 1855, '56, '57 and '58. He had a genial manner, and it was a pleasure to hear him talk to his friends and patients.

Dr. C. G. Raue acquired his homœopathy from Constantine Hering. He practiced for a time in Trenton, and then removed to Philadelphia. He was Professor of Pathology in the Homœopathic Medical College of Pennsylvania, and after the split he filled the same chair in the Hahnemann Medical College of Philadelphia, and was a lovable, genial teacher. His greatest work for homœopathy was the preparation of his "Special Pathology and Diagnostics with Therapeutic Hints." For many years no homœopathic physician's library was complete unless it had Raue's Pathology.

Dr. P. E. Vastine was Treasurer in 1855 and 1856, while Dr. R. Titsworth was Treasurer in 1857. He lived in Plainfield.

Dr. Isaac M. Ward was our first President, in 1854. He was one of the charter members of the American Institute of Homœopathy and died in 1895. He had been Professor of Obstetrics in the Homœopathic Medical College of Pennsylvania previous to his settling in Newark.

Dr. Walter Ward, although one of the founders in 1854, never held an office till 1872, when he was chosen President. He used to tell his colleagues he was the baby member of the American Institute of Homœopathy in 1844, although he was twenty-nine years old, showing conclusively there were not many young men practicing homœopathy in those early days.

Dr. Ross M. Wilkinson, of Trenton, was Provisional Secretary in 1856 and '57, Vice-President in 1871, '72 and '73, and President in 1874. He was a good prescriber, could prepare a rattling good paper for any society he was a member of and was an all round good fellow.

Dr. John J. Youlin, in 1845, settled in Van Vorst township, afterward made a part of Jersey City, and in 1876 he was practicing within two blocks from the spot where he first put out his shingle. He was Provisional Secretary in 1855, Vice-President in 1856 and '57, President in 1858, 1868, 1869, 1870.

He was the most forceful man among us, and became President of the American Institute of Homœopathy in 1874.

Probably the greatest work he accomplished for the Society was its incorporation. To accomplish this he visited all parts of the State to interest members from every section. In 1869 he and Dr. Frederick B. Mandeville visited the West Jersey Homœopathic Medical Society, in Camden, and received its active co-operation. Of all the incorporators, Dr. Laban Dennis and myself remain. Here in my hand is the certified copy of the Act of Incorporation of the New Jersey Homœopathic Medical Society. That was one of the days of my life when I met the workers of the State Society in Trenton, the day our bill was introduced by Hon. William H. Barton, who represented my county in the House of Assembly. Dr. Youlin was a pleasing talker, and to him more than any other can be attributed the wonderful growth of this society. He died in 1881.

Dr. John S. Bassett was the last survivor of the little band of founders. He served as Vice-President in 1858. He first practiced in Paterson, moving to New York City in 1861. We wanted him for our guest of honor at our meeting in Deal Beach in 1904, and I went to New York to see him and to invite him to come. It was a great pleasure to meet this veteran, and dine with him and his family. But the following letter received by us explained why he could not come:

New York, May 2d, 1904.
Monday, 1 P. M.

My Dear Dr. McGeorge:

Your letter just came to hand. I thank you for remembering me and it would give me much pleasure to accept your invitation but I am physically unable to undertake it. The few hours I am compelled to work is about all I can endure.

Remember me to the members of the Society, wishing them continued success and unity.

With regard for yourself,

Obligingly,
JOHN S. BASSETT.

In closing I must speak of one man who joined the society the same time I did, April 15, 1868, and whose name appears under mine in this Roll Book. [Roll Book shown to the society.] I refer to that grand old man, Dr. Frederick B. Mandeville. He was a tower of strength in our early days, and had more power, politically, than any other member. To his patients he was "the beloved physician." To his friends

he was a Christian gentleman. Courteous and affable, when he took your hand, you knew his grasp was friendly. He never forgot his manners. At our society meetings, in discussing papers that had been read, he would say such pleasant things about the writer and the paper, that we always liked to see him rise and hear him talk. When the society met at Atlantic City, and the West Jersey Society had three papers on Uterine Disorders, by Drs. Norisby, Street, and myself, mine being "Therapeutic Treatment," he paid me a delightful compliment. In rising to speak, he said: "Dr. McGeorge's papers are always classical." I never forgot that graceful tribute from a man who was competent to judge of the value of the paper he discussed.

Dr. Mandeville could write good papers and charming epistles, as the following letter to Hon. Rudolph F. Rabe, Senator from Newton County, and a steadfast friend of this society and homœopathy, demonstrates:

Hon. Mr. Rabe.

My Dear Sir: I have just looked over your bill entitled "An Act to Regulate the Practice of Medicine and Surgery." This must meet with the approval of every medical practitioner as well as every layman in the whole State. First, owing to the fact that they, the people, should be the better protected from charlatanism and given men that are at *least educated* for *their profession.* Second, then the influx into all our large cities of individuals who have no responsibility, either medical or socially, will end. Third, it will raise our calling and protect us as physicians.

If we need legislation—and I think we do in this direction—I can see no objection to this Act and I think of no one who can protest, unless it may be those who object to Homœopaths sitting in the same board with the Allopaths.

Thanking you for what you have done in the advance of the cause of Medicine, and particularly our *own school,* and for your past personal courtesy, I am

Yours faithfully,

F. B. MANDEVILLE.

Newark, March 5th, '78.

Incidentally we have a Rudolph F. Rabe among us today, a worthy son of a worthy sire. We were proud of the father forty years ago, we are proud today of the son, Prof. Rudolph F. Rabe, a New Jersey man, whom we have loaned for a time to New York. The letter to the Senator shows how Dr.

Mandeville sized up the bill providing for a State Medical Examining Board.

But this letter to me is more precious, because it shows that our beloved friend and brother physician, while doing his duty here, had time to think of the world beyond. He was keenly interested in anything relating to New Jersey, and I had sent him a copy of a paper I had read before the Gloucester County Historical Society, containing Lafayette's report to General Washington on the Battle at Gloucester:

Newark, Jan. 31, 1906.

My Dear McGeorge:

Thanks for the "Gloucester" article. I was much pleased and instructed, and congratulate you on its production and hope it may awaken new interest on both the times and results and self-sacrificing efforts of our forebears.

I am sorry for the loss of our dear friend Cooper. I had hoped to have been able to have been present at his funeral. He was a good, hard-working fellow in the interest of our cause. One by one we gather at the final call, and soon all the old guard will have answered for the last time.

May we be ready when the call comes to us, having our lamps trimmed and burning, and our faces turned Zionward.

Affectionately yours,

MANDEVILLE.

Dr. Mandeville died April 26, 1909. Free from care, resting from his earthly labor, he is enjoying in the heavenly world that peace which passeth all understanding. Truly we can say of him: "Enter thou into the joy of thy Lord."

THE BLOOD-PRESSURE IN AMYLOID DISEASE OF THE KIDNEY.—K. Hirose (*Bull. Johns Hopkins Hosp.*, 1918, xxiv., 191) in a study of 87 cases of amyloid disease, found that 59 showed definite amyloid changes in the kidneys, associated with chronic nephritis. Most of the patients died in the third decade. This the author considers probably due to the fact that tuberculosis is so common in persons of that age. Tuberculosis and syphilis were the most common infections associated with these cases, but others were often present. It was impossible to determine whether the nephritis antedated the amyloid disease or developed at the same time. In all but one case of the fifteen in which the blood-pressure was noted, it was either normal or below normal. Ten of the fifty-nine cases showed cardiac hypertrophy. Only one was associated with small, granular kidneys; and in none was there high blood-pressure. The author thinks that even if the nephritis did produce hypertrophy of the heart with increased tension, the amyloid-forming process reduced the blood-pressure to a low point, and may even have decreased the size of the heart.

THE TREATMENT OF ACUTE MIDDLE EAR INFECTIONS.

H. S. WEAVER, M.D., PHILADELPHIA, PA.

Clinical Professor of Laryngology, Hahnemann Medical College, of Philadelphia.

(Read before the Homœopathic Medical Society of Central Pennsylvania, December 12, 1918.)

During the course of all infectious diseases we are liable to have the middle ear and accessory sinuses of the nose infected. The severity of this infection depends upon the epidemic and the particular variety of bacillus found.

The catarrhal symptoms manifested during the recent epidemic of influenza were not so virulent as found in previous years; but the bronchial complications were the most fatal that physicians of the present day have ever seen. In all cases suffering from high temperature and marked catarrhal symptoms, the patient is liable to middle ear and sinus complications.

This was true during the past epidemic of influenza. Many of the cases developed not only the bronchial complications but on the second or third day acute neuralgic pain in one or both ears. Fortunately this year very few of these middle ear complications resulting from influenza were of the virulent type, many of them subsiding without even the necessity of opening the membrana tympani. During the epidemic of influenza a few years ago the middle ear infections were mostly streptococcic and many of them, in spite of all treatment instituted, did not respond until the mastoid was opened and drained.

Middle ear infections occur so many times in our little patients and are treated as trivial symptoms, when in fact their neglect frequently results in impairment of the hearing or endangers the life of the patient by extension into the mastoid cells and later brain abscess and death, or in less severe cases develop a chronic discharge from the ear which resists all treatment until a radical operation is performed.

I feel that occasional attention being called to these middle ear infections manifested by discharge from the ears, or pain and soreness in that region, will tend to make us more careful in their management. All cases which have a discharge from one or both ears should be carefully examined by the attending physician, so that a thorough knowledge of

the condition of middle ear and all adjacent organs can be ascertained.

When this is accomplished proper treatment can be instituted so as to hasten the cure of the discharge with the least damage to the hearing apparatus. An acute middle ear discharge, if allowed to continue, may soon pass into a subacute or chronic otitis media and cause irreparable damage to the ear. Mastoid abscess, labyrinth disease or brain abscess, with total loss of hearing or actual loss of life, may result from improper treatment of these cases. Proper precautions are necessary to prevent these complications following all forms of acute diseases, especially the infectious type which show marked catarrhal symptoms and have an affinity toward attacking the mucous membranes, especially those of the upper respiratory tract.

Operation upon the postnasal space may be attended with some inflammatory reaction and extend along the Eustachian tubes to the middle ear and cause infection. Any nasal operation, especially those requiring the use of a pack to control hemorrhage, may give rise to some middle ear complication.

Nasal douching as done in olden times, when plenty of force was used, cannot be too strongly condemned. Cleanliness of the nasal cavities and throat is just as essential to good health as clean hands for the enjoyment of a good meal. Nasal douching can be thoroughly and sagely done. The essential thing to remember is to avoid resistance to the anterior nares when blowing the nose to clear it after a nasal flushing. The resistance caused by using a handkerchief will in many instances be sufficient to force some of the water into the Eustachian tubes, which in turn is followed by a sharp pain in the ear and may give rise to middle ear inflammation, with later abscess formation.

Traumatism from the removal of foreign bodies in the external canal may give rise to middle ear inflammation. Acute middle ear infections may be unilateral or bilateral, and are more common among children than adults.

The reasons for these are that children are more subject to the diseases predisposing these infections. One of the dreaded complications of the acute exanthemata is middle ear infection; but fortunately these are not so common as in former years. Care and attention to the upper respiratory tract during the height of the disease lessens the danger of

extension of the inflammation into the ears. Recurrent attacks of middle ear infection is one of the symptoms of adenoid disease and when found demands immediate attention to the postnasal space, otherwise a useful organ becomes defective. These defects are not always apparent at the time, but later in life show themselves by a gradual loss in hearing for which an aurist is consulted for relief. The examination will reveal a scarred drum membrane due to repeated attacks of middle ear infections with spontaneous rupture of the drum. Each rupture or artificial puncture of the membrane will cause some scar tissue formation with later interference of its normal function.

In all cases of middle ear infection the mucous membrane lining the Eustachian tubes and middle ear becomes intensely hyperemic, this is soon followed by inflammation and rapid swelling with cell proliferation. Mucous secretions soon follow, completely filling the drum cavity. From the swelling of the mucous membrane lining the Eustachian tubes this means of drainage of the fluid contained within the middle ear is shut off, consequently the point of least resistance is through the membrana tympani. Should the ear be examined before perforation has taken place a decided bulging of the drum membrane will readily be seen.

Simultaneously with these middle ear infections we will have more or less congestion of the mastoid antri and mastoid cells. The aditus adantrum or the means of communication between the middle ear and mastoid cells is so situated or so constructed as to render the mastoid cells practically free from infection, provided absolute drainage is established through the external ear, showing one of nature's wise provisions in protecting the mastoid cells from invasion. In all cases of middle ear infection there is more or less mastoid inflammation but in the great majority of them when the middle ear is properly treated and drained all these mastoid symptoms rapidly subside.

The chief subjective symptom is pain, of a severe neuralgic type, radiating over the affected side to all parts of the head. These pains are always worse at night and usually throbbing in character, increased by stooping and by blowing the nose. The pain resulting from an acute furunculosis of the external canal are always worse from moving the jaw, touching or moving the ear and are not aggravated by blow-

ing the nose or inflating the middle ear. It is difficult at times without these differential points to decide between an external and middle ear infection because of the extreme swelling of the external canal.

Some of the cases of furunculosis present swelling and tenderness over the mastoid rendering a differential diagnosis difficult. The pain in all cases of acute infections of the ear, whether external or internal, is very acute, and many times misleading, particularly in children. Not infrequently physicians are called to see a sick child and are unable to make a diagnosis as to cause of the trouble until suddenly a discharge from the ear develops and the child immediately improves. With small children a good rule to follow is to invariably examine the ears, where the cause of illness is not clearly defined.

The examination of an ear is not a difficult matter and can be done by all physicians. The technique for using the head mirror and ear speculum, as taught now, allows no excuse for neglecting this important aid in diagnosis. Even older men, who were graduated before the head mirror was so extensively used, can master it in a very little while.

In cases of middle ear infection when examined during the first stage the drum membrane will show a decided congestion, this may extend even to the lining of the external canal. Later when secretion has taken place in the middle ear and drainage through the Eustachian tube has been interfered with, the drum membrane will show a bulging usually in the posterior segment, which if seen just prior to spontaneous rupture, may show a yellowish spot at the place where rupture takes place. Following the spontaneous or artificial rupture and evacuation of pus, there is almost immediate relief of pain but should there be a temporary obstruction to drainage, such as closure of the opening in the drum by a clotted piece of mucus or pus, a rapid return of pain will follow and continue until the obstruction to drainage is removed.

Thus spontaneous rupture may take place in any part of the membrane and may be single or multiple. By inspection following a spontaneous rupture or a paracentesis of the drum, you are able to see the pulsations of the inflamed mucous membrane lining the drum cavity and it is not difficult to count the heart beats by watching this opening.

The treatment of acute middle ear infections may be divided into preventive and curative. Every possible care and attention should be given all cases manifesting the usual catarrhal symptoms which predispose to middle ear inflammations. Care and attention to the ear will in many instances prevent abscess formation, thereby avoiding the dangers incident to acute middle ear infections.

In many instances, however, the physician is not called until the stage of preventive medicine has passed and then the attention should be directed to the cure of the condition with the least danger to the patient and the best preservation of the hearing apparatus.

The treatment of these cases, it seems to me, may be divided into medicinal alone, and operative and medicinal. Just where the one ends and the other begins is a matter for the physician's judgment. Recall for a moment the usual onset and pathological changes which take place early and you will see my reasons for this division. The first subjective symptoms which call attention to the ear is a sudden, sharp lancinating and radiating pain in the affected ear. With this we have the first pathological change taking place, namely, intense hyperemia of all the surrounding mucous membranes. Should the physician see the case during this stage, the properly selected remedy will be all that is necessary to cure. It is true that many of these cases pass beyond this stage in a very few hours and the second pathological change has taken place, namely, swelling and exudation, requiring drainage of the middle ear as well as internal medication for the relief of symptoms.

This does not mean that all cases requiring surgical treatment are relieved by human surgery. Nature is a good surgeon as well as a good physician and many times spontaneous rupture of the membrana tympani supervised by nature completes the necessary surgical operation and the patient speedily recovers. The above symptoms will indicate why I insist upon the attending physician examining all cases of acute pain in the ear.

Should our examination reveal simply a congestion of the drum membrane with some redness of the external canal, near the drum, we know that very little or no exudation has taken place and we have simply the stage of hyperemia and internal medication will suffice. On the other hand, should

your examination reveal an inflamed, glossy membrane, bulging towards you, we know that it has passed beyond the stage of hyperemia and the middle ear is filled with a serous exudation which must be relieved, otherwise an extension of the inflammation to the mastoid antrum and mastoid cells will soon take place.

The treatment now no longer is medicinal alone but becomes surgical and medicinal. A free incision of the membrane in the most dependent portion, preferably the posterior lateral quadrant, will give absolute drainage and relieve all symptoms. The question now may arise, would it not be better to allow nature to perform this operation? Fortunately for our patients, nature is successful in many of these cases, while in others fatal accidents have occurred. Should the membranum tympani be very tough and unyielding, spontaneous rupture may be delayed until inflammation and exudation have taken place within the mastoid cells and then drainage through the external canal alone will not be sufficient and more radical surgical interference becomes a necessity. Spontaneous rupture of the drum membrane and a free discharge of the enclosed serum or pus will give immediate relief of symptoms, but this in many cases will not entirely cure the case. The opening is not free enough to allow complete drainage and the case drags along from day to day or week to week, greatly retarding the restoration to the normal. Again, a clean cut wound in the membrana tympani will not only give better drainage but will heal more kindly, leaving less scar tissue and, above all, save the patient hours of intense suffering with a drum membrane more useful for future hearing.

After the membrane is opened either by nature or the physician and drainage is well established, our treatment necessarily must differ from that where medicinal measures alone are needed. We now have a discharging cavity liable to infection to deal with, consequently cleanliness should be the first step. Everything coming in contact with the ear must be as nearly sterile as possible. The external ear must be kept free from discharge. Allow no caking of pus in the external canal. In syringing or mopping the ear, care must be exercised not to irritate the inflamed parts, otherwise additional infections may result. In uncomplicated cases, I believe the milder antiseptics are best, such as boracic acid solution or

normal salt solution. In the more severe cases, weak solution of bichloride is best.

While the local treatment in these cases is important, we must not overlook the medicinal side. Properly selected remedies will control the inflammation, thereby shortening the attack and when the two are used conjointly the best results must necessarily follow.

During the first or hyperemic stage, when pain is the annoying symptom, great relief may be obtained by dropping some hot carbolized glycerin in the ear (ten or fifteen drops of carbolic acid to the ounce of glycerine); or you can loosely wrap some cotton on a probe and saturate in the above solution and heat and pack loosely against the drum. The hygroscopic action of the glycerine will in many instances give quick and permanent relief. Dry heat applied to the ear, in the shape of salt bags, bran bags, Japanese lamps, or hot-water bottle covered with flannel, is a valuable adjunct in the treatment of these cases. Moist heat or poultices should not be allowed, because they favor maceration of tissues, thus promoting pus formation and suppuration of the parts, with loss of drum membrane. The remedies most frequently useful during this stage are aconite, belladonna, ferr. phos., mag. phos., gelsemium, chamomilla, mercurius, pulsatilla and hepar sulph.

Another remedy which I have used in adults with almost universally good results has been morphia, one-eighth to one-fourth of a grain, with 1-150 of atropine, the dosage depending upon the severity of the symptoms. Dissolve one tablet in half glass of water and give a teaspoonful every ten minutes until the pain is relieved.

In the second stage, when pus has formed and drainage has been established, another class of remedies becomes useful such as, pulsatilla, hepar sulph., kali sulph., mercurius, silicea, arsenicum iod, kali carb., sang can., kali bich., and sulphur.

The points which I wish particularly to emphasize are:

(1) That many of these cases of acute middle ear infections are preventable by proper attention to the upper respiratory tract during the acute infectious diseases.

(2) That all cases of acute pain in the ear should be carefully examined by the attending physician.

(3) That in recurring attacks of earache the postnasal space and nasal cavities should be examined for probable causes of the inflammation.

(4) That too little attention is paid to these attacks by the laity and they are allowed to drift along without treatment until irreparable damage has been done to the hearing apparatus.
(5) That when children are sick and show no clearly defined cause for illness, the ears should be invariably examined for probable infection.
(6) That in all cases where a bulging of the drum membrane is present an immediate paracentesis should be done to establish adequate drainage.

A CLINICAL LECTURE ON "COLD IN THE HEAD," OR "CATARRHAL FEVER."

BY

CLARENCE BARTLETT, M.D., PHILADELPHIA.

Professor of Medicine in the Hahnemann Medical College, of Philadelphia.

(Delivered in the Elkins Ampitheatre, January 28, 1919.)

FONDNESS of the bizarre or unusual is a noteworthy trait of humanity in general and of medical teachers and medical students in particular. Hence it is that examples of rare clinical conditions are too often made the subjects of clinical teaching to the exclusion of "every day" conditions. Last week there was brought into this hospital a very obscure case, which we diagnosed as one of pneumothorax. He died within a few days. The autopsy confirmed the diagnosis made but discovered in addition a fistulous tract between the pleura and the stomach, a loculated empyema, and some other conditions. The final condition which brought him to us was a terminal one, and with the history as given and the physical signs as obtained, a complete diagnosis was impossible; and yet that case, owing to its peculiar features, possessed us all as one of great interest.

Cases of "cold in the head" are common enough in general medical work, but as subjects for admission to our wards, they are great rarities. Indeed I cannot recall that we have ever had one with us before. But this one was referred to

us by an army medical office, with the diagnosis of influenza. During and following the pandemic of thirty years ago, there were more than the usual number of cases of "common cold," many of which were diagnosed by physicians as grippe. History is repeating itself, and following the waning epidemic of influenza many cases of "cold" are encountered, and as before, the diagnosis of "influenza" is thoughtlessly made.

What is "a cold"? This sounds like a silly question. Every one knows the answer, of course. I am told at once that it is a condition brought about by exposure, *i. e.*, taking cold, and characterized clinically by initial mild constitutional disturbance, inflammation of the nasal mucous membrane, and a flow of clear, watery mucus, known technically as coryza; and yet that definition omits the important point. The common cold is a constitutional condition, dependent upon infection by the bacillus catarrhalis, and has as its features the symptoms which we have been accustomed for years to regard as the whole thing. What is a cold and why do people take cold? are questions as old as the hills. Numerous essays and at least one monograph published in book form have appeared on the subject; but it was not until "colds" were recognized as due to infection that we have been able to understand the whole condition. For many years we knew, of course, that when "a cold" affected one member of a family, the others were pretty sure to suffer likewise within a few days.

"Colds" have long been known as "rhinitis"; indeed the laity has already gotten on to this term, as it rushes to the corner druggist for rhinitis tablets. But this name, although an apparent improvement over "cold," is really a step backwards, because it suggests that the condition is a purely local one. It was with great pleasure, therefore, that I discovered in the last edition of Osler's Textbook a section on "Catarrhal Fever." Such a designation places the disease where it belongs among the infections, and the nomenclature is in line with enteric, rheumatic, pneumonic, and cerebro-spinal fevers. It also speaks for the constitutional nature of "colds."

All of this may seem to you as making too much talk about a very minor trouble. Remember, however, that it is the little things that may make or break a man. And I am sorry to say that for some reason or other the general practitioners, in our large cities at least, do not treat as many cases

of catarrhal fever as they should, and this because the laity does not consult them. The latter appears to have become obsessed with the idea that the family practitioner knows nothing about "colds," and hence goes to the specialist in diseases above the collar, who is expected to treat the disease locally. The specialist is not to blame for the unfortunate situation. On the contrary, it is the medical man who is at fault because of his failure to give these cases the serious attention he accords other illnesses. It is not always an easy matter to cure a cold, and the laity is fully cognizant of the fact. If once a physician obtains a reputation for success in this line, his career is assured.

Just as one portion of the laity proceeds to the specialist, so there is another that patronizes the corner druggist, who flaunts before us as we pass his windows large signs emblazoned with "Use our 24 hour cold cure," "Prevent influenza by using our rhinitis tablets," "Take home with you a 35 cent bottle of our cold cure." All of which exemplifies the gullibility of human nature. I have sometimes thought that seeing such signs made people wish they had a cold in order that they might try out the wares thus glowingly described.

The old idea that catarrhal fever is the result of exposure stands today; but we modify our views to this extent: The exposure produces a lowered resistance, and infection which would otherwise have been impossible, does the rest. We know that individuals possess varying degrees of susceptibility and immunity. That some persons "take cold" on the slightest provocation; while others appear to be immune however great the exposure; that some people vary in their immunity from time to time.

While in theory the infection producing "cold in the head" is a simple matter, in reality, it is not always so, for there are many instances in which it is a mixed one, and several organisms act as the producing agents. This probably accounts for the peculiarities exhibited by certain epidemics. Here I have used the word "epidemics" as applied to common colds. We have all of us experienced periods during which "colds" are prevalent in a community. Practically every one is a sufferer at such times. It may happen that these waves of disease incidence just come without any apparent cause or reason; and then again, they follow in the wake of an epidemic of influenza; or they appear to be examples of seasonal

prevalence, and come in conjunction with epidemics of more serious disease as pneumonia.

I have said that the common cold is a constitutional disease. Its symptomatology does not always indicate such a condition; but in the majority of instances we have some evidence to that effect. The initial phenomena usually consist of chilly feelings and some general aching or malaise. Possibly, if the thermometer is used, there is a slight rise of temperature, usually to 100° F. or 101° F., but seldom higher. In the exceptional instances the individual reacts with unusual severity, and the fever may be more severe. Usually also the febrile movement is of but short duration, and is not recognized because no attempt is made to discover it by using the thermometer. I had a cold myself last week. I felt "achy" and indisposed for work. I labored under the impression that I was tired or overworked, and I just rested. A day or so afterwards the coryza developed and the pains disappeared. Many a person has had just such experiences.

Almost immediately following the general phenomena, when such are present, the patient has a stuffed feeling in the nasal passages, due to swelling of the mucous membrane. This is ofttimes attended by a sense of dryness, and after a shorter or a longer time, the dryness gives place to an active secretion of a clear mucus, which keeps the victim busy with his handkerchief. In some instances, a very annoying early symptom is a raw, scraping pain in the throat, aggravated by swallowing, and it has been my experience that "colds" presenting this phenomenon are more resistant to treatment than are others. This pain clears up when the coryza begins. Sometimes the mucous secretion corrodes the skin with which it comes in contact. I am not sure that this effect is due to the qualities of the mucus, but may be the result of a peculiarly vulnerable skin, which becomes irritated by the more or less constant moisture and the mechanical damage worked by the frequent wiping.

In the course of two or three days, the fluent coryza gives place to a flow of a thick, yellowish mucus, which we have become accustomed to associate in our minds with the pulsatilla symptomatology, and for which we administer that remedy. Then in simple cases, the illness is at an end.

In the less fortunate cases, the "cold" travels further down the respiratory tract, and as a result we have laryn-

gitis, with its attendant aphonia, or an acute bronchitis. As to active complications of "colds," I believe them to be few, if the treatment is well advised. In many cases, there is an associated mild inflammation of the accessory sinuses of the nose, the frontal sinuses in particular being involved. The involvement of the latter accounts for the severe frontal headaches which some patients experience during the stage of mucous membrane swelling. I am really surprised, in view of current practices among the laity, that sinus complications are not far more frequent than they are. In these days of patent douches and sprays and lay medication, we wonder that infection is not carried to the sinuses with alarming frequency. For years past, the best medical thought has been opposed to such measures as distinctly harmful. Nature is a good physician and resents the interference, which may carry the infection not only to the sinuses but also through the Eustachian tubes, to the middle ear. Of course, such complications may ensue even in cases in which there has been no unwise therapeutic activity, but instances of this kind are surprisingly rare.

Now for our patient: He tells us that his illness started in 5 days ago with general aching, with sneezing. I forgot to tell you that sneezing is often one of the initial symptoms; indeed, it may be the first sign that the patient has "taken cold." Next he had a "stuffiness in the head." Then came a coryza. It was also noted that he had a rise of temperature with the aching, and the medical army officer in charge diagnosed influenza and sent him to us for care. We placed him in bed, and prescribed gelsemium. Since he has been with us, his illness has been symptomless, other than a slight discharge from the nose, and now he is practically well. The whole course of the disease has been opposed to the influenza theory. You will notice the temperature chart, which exhibits a mild febrile movement, thermometric observations having been taken every four hours in accordance with our hospital routine. There have been two distinct febrile rises, each to but a little over 100° F. We have been more strict with him than we usually would be in the treatment of a "cold in the head," because he was sent to us with the diagnosis of influenza, and you all know the serious consequences arising from neglect of that disease. Personally, I believe that we need not have been so careful. Nevertheless, I also believe that

recovery is more rapid and more certain when we follow this course.

Always during influenzal epidemics, there is a certain number of cases of catarrhal fever diagnosed as "grippe," or influenza. While inexcusable scientifically, such a careless practice serves a useful purpose in that it forces the patient to give himself the care that he would otherwise neglect. It would seem that the diagnostic error is less reasonable in the present epidemic than ever before, because very few of the cases exhibited the phenomena attendant upon catarrhal rhinitis. And again catarrhal rhinitis seldom presents the severe constitutional reaction of the Spanish influenza or of the epidemic of 30 years ago.

Next comes the treatment of catarrhal fever. The remedies are few, but they are good and efficient. In the first place, we have two remedies which suit probably 90 per cent. of the cases. In the very beginning, with chilliness and febrile movement and sneezing, *aconite* is unquestionably the most efficient remedy. My personal practice is to give it in the tincture or the first decimal dilution, in doses of one minim every hour, and if administered in time, which it seldom is, throttles the process at once. The vast majority of cases come to us with the beginning of the fluent coryza, and it is then that we find gelsemium the best remedy. Gelsemium is now an old medicine. It was first popularized by Hale, of Chicago, who wrote a monograph concerning it, his material being based upon personal provings. Later he summarized the facts in his work, forgotten by the present generation, and entitled "New Remedies." Hale made the claim that gelsemium was an invaluable remedy for all acute catarrhal processes affecting any mucous membrane. Concerning affections involving the nasal cavities, he says: "When influenza is epidemic,* at any season of the year, you will always find this remedy called for by the following symptoms: Chilliness up the back, cannot move away from the fire without chilliness; the head is hot before the fever sets in, which is not attended by thirst, restlessness and anxiety as with aconite, but a torpid, heavy condition. The head feels heavy and big, the face scarlet, the eyes suf-

*The edition from which I quote bears the publisher's imprint of 1875. This antedated the great pandemic of 1889 by fourteen years, at which time the homœopathic phpsicians of the country were unanimous in their praises of gelsemium as a remedy. It is also worthy of note that Hale made use of the term "catarrhal fever."

fused, the nose runs a watery mucus, but little sore throat, the pulse large, full, quick, but not very hard, and the febrile movements are remittent, aggravated at about the same hour every day." Next Hale interpolates an aside concerning the differentiation of fever remedies, a differentiation which met with the approval of the immortal Farrington, and I quote as follows: "*Aconite*—Pulse small, hard, wiry, quick; *Veratrum viride*—Pulse hard full, bounding incompressible; *Baptisia*—Pulse full irregular, compressible. Gelsemium, as above."

Now, it has been my experience that we need not wait for the manifestation of such pronounced symptoms as those quoted from Hale as indications for gelsemium in catarrhal fever. The few phenomena that are present in the average case should be sufficient for us. Goodno showed this years ago in an article bearing the title "Some Remedies, New and Old." Goodno really popularized gelsemium as a remedy for "common colds." His dosage I have found to be reliable. He advised material doses of the tincture, *e. g.*, one drop every hour. As it is inconvenient for ambulant patients to take medicines at such short intervals, I have modified the dosage for convenience to three drops every two hours.

If cases come under your care early, it is seldom that you are obliged to go further than the two remedies already advocated. Later, with the development of the muco-purulent secretion, you may find it necessary to resort to pulsatilla; or if the infection invades the larynx, you may find phosphorus or kali bichromicum indicated and useful.

As to local treatments, the less complicated we make them, the better. Certainly we should do away with the altogether too prevalent practice of douching with salt water and antiseptic and oily mixtures so skilfully advertised in the press and in the drug store windows at every corner. I believe them to be distinctly harmful. The gentle, oily vapors containing menthol are grateful to the patient and do no harm. Cocaine, although it relieves the swelling of the nasal mucous membrane, is unquestionably harmful as it promotes vascular relaxation. Adrenalin is a good palliative so far as relieving obstruction is concerned, but it is in no sense curative.

The best nasal application is tampons saturated with a 25 per cent. solution of albuminate of silver. Of this drug there

are several preparations on the market, of which argyrol is the type. The cotton is wrapped compactly around a smooth probe for a distance of about 3 inches. It is then saturated with the solution, and inserted. The probe is next removed by a reverse twisting motion, and the tampon permitted to remain about twenty minutes. Applications are made to both nostrils. In response to the application there ensues a very free flow of mucus which greatly relieves the local congestion, and gives the patient considerable comfort. The treatments may be repeated daily if necessary.

Occasionally one meets with a patient suffering from acute rhinitis in whose case it is necessary to throttle the discharge for an evening because of a dinner or some social or business function. Under such circumstances, I have not hesitated to prescribe a single dose of atropia sulph., ranging from 1-200 to 1-400 of a grain, according to the individual's susceptibility to the medicine.

Autoserotherapy in Tuberculous Pleurisy with Effusion.—As far back as 1894, Gilbert reported a series of cases of sero-fibrinous pleurisy which he had treated by withdrawing a few c. c. of the fluid from the chest and immediately injecting it into the subcutaneous tissues of the patient. This treatment was designated by Gilbert as "autoserotherapy," and was said by him to be highly efficacious in promoting a rapid absorption of the effusion and following the absorption to leave the patient in good general condition. Since then numerous clinicians have taken up the subject and have reported varied results, some praising and some condemning. Curtis Lyter, of St. Louis, was induced to study the subject practically by reason of many of the glowing accounts published, and as a result has come to the conclusion that it is an immensely overrated remedy. In a series of cases, of 23, only 8 or 34 per cent. showed immediate absorption. The absorption in these 8 he believed to be due to natural physical phenomena rather than to the stimulating effect of the treatment. His results indicate not only that the treatment does not cause absorption accompanied by diuresis, diaphoresis, rise of temperature and leucocytosis, but that in some instances it is not entirely devoid of deleterious effects upon the tuberculous process in the lungs. The assertion that 80 per cent. of all tuberculous effusions undergo spontaneous absorption should be qualified, as the spontaneous absorption does not take place for months, depending probably upon the organization of the fibrinous covering of the pluera.—*American Journal of the Medical Sciences*, November, 1918.

Business Sessions of the Homœopathic Medical Society of the State of Pennsylvania

The meeting was called to order at 10:45 A. M. Tuesday, September 17, 1918, by the President, Dr. George B. Moreland, of Pittsburgh.

ADDRESS OF WELCOME

BY

MR. A. C. TERRY

Secretary of the Chamber of Commerce.

I hardly think that you will be able to call this an Address of Welcome. As a matter of fact, I do not know but that I am usurping the prerogatives of the Chamber of Commerce; but they sprung it so suddenly that there was only one thing to do, and that was to get away with it. Dr. Nicholson was, I think, very ill advised to come to me and ask me to do this; but, nevertheless, we do welcome you. We welcome you to the Chamber of Commerce, because you are a body of scientific people who are instrumental in the great uplift of the State of Pennsylvania; and I am very glad indeed to be honored by talking to you just for a moment, to tell you that you are receiving privileges from the Chamber of Commerce of Pittsburgh that have not heretofore been granted to anyone. I happen to be very well acquainted with our good friend, Dr. Metzger. I see that he is in the chair. I do not know in what capacity; but in whatever capacity he may be, he is all right. And there is another one of your members who, if he were here this morning, I should be glad to get a punch at, as the boys say; and that is Dr. Fred Woodridge, who has been our family physician for years. I am glad that he is a member of this society. One of the privileges extended to you which have not been accorded to other bodies is the privilege of the exhibition that you are holding. Never, in the history of the Chamber of Commerce has that been permitted; so I congratulate you on being able to pull that over on our House Committee—because they are pretty strict.

A few minutes ago, our manager spoke to me about a privilege that had been asked by some of you, to permit the ladies to have luncheon in one of our private dining rooms. That is an exceedingly embarrassing question for us to handle. Our Board of Directors has been on the fence regarding extending privileges to women, and I think that very soon we

shall consider women as a part of the Chamber of Commerce; but until that action is taken and approved by the members at large, I am placed in the embarrassing position of having to tell you that we cannot grant the privilege. At a Grocers' Convention held here a short time ago, the same question came up. It so happened that I addressed the convention for a moment or two, and there were several women in the association; and I came near being mobbed for what I said. So I am sorry that we are not in a position to grant that privilege. Dr. Metzger, however, spoke to me a few minutes ago regarding the privilege for men in our dining room; and I told him that instead of taking the trouble to register their names in our registry book, we would grant guest cards to those who desire them. That means signing my name a hundred times or more. The doctors who are members of the Chamber of Commerce have agreed to help me in this.

I am glad to be with you this morning and say these few words of welcome.

The program as presented by the Secretary was adopted on motion.

Dr. I. D. Metzger, Pittsburgh, Pa.: I should like to state, with regard to the program, that it was rather difficult to secure one this year. Everyone had something else to do, not only their own work, but that of other people. Because of that fact, it was not only difficult to secure a chairman, but also to secure aids. The chairmen know more about that than I do. However, I think we can offer to the members a rather unusual program, and one that is better than any that we have had in several years; and the prospects are good for the fulfillment of the program.

Dr. Moreland: The next matter is the Address of the President. Neither of the vice-presidents being here, I shall ask Dr. H. S. Nicholson, of Pittsburgh, to take the chair. If he has any feeling of reluctance, I, having a commission ahead of him, shall order him.

(Published in The Hahnemannian Monthly, September, 1918.)

Dr. Nicholson appointed as a Committee to consider the Address of the President, Drs. Edward Glenn, Berwick, Pa., Roland T. White, Pittsburgh, and W. F. Edmundson, Pittsburgh.

The Report of the Secretary was presented by Dr. Metzger, as follows:

The Club Rooms of the Chamber of Commerce are pri-

marily opened to members only. The members have the privilege of inviting guests to the chamber, and the first thought was to have groups of half a dozen register with some member of the chamber who happens to be a member of the society; but the Secretary of the Chamber of Commerce, Mr. Terry, thought it best to give registry cards. To do that, we must have your names and addresses. There has been placed outside the door a book for recording your names and addresses. We should like them recorded as soon as possible. I think I shall have the book brought in and passed around.

Luncheon is served from 11 to 3 o'clock, on the next floor above. At 1 o'clock in the afternoon, in the auditorium to the rear of you, there will be an address by Rev. Dr. Marsh, who has been abroad, and returned a week ago. His observations on the field of action in France will prove very interesting. There will be, each day, either moving pictures or an address. The war pictures are first released here, in the Chamber of Commerce, from Washington, and then sent out to the other picture houses. To-morrow there will be an address by one of our members, Dr. Royal S. Copeland, before the Chamber of Commerce.

My report consists of the minutes of the last meeting. You have read them, no doubt, in the HAHNEMANNIAN MONTHLY. If you desire it, I will read them.

DR. WILLIAM C. HUNSICKER, Philadelphia: I move that the reading of the minutes be dispensed with. (The motion was seconded and carried.)

DR. ELLA D. GOFF, of Pittsburgh, treasurer of the society read the Treasurer's Report, which was as follows:

DR.

1917, September 17.	To balance	$2,257.89
1918, September 16.	To annual dues collected	2,082.00
		$4,339.89

CR.

1917, Sept. 21.	By Order No. 191, to Wm. H. Hillegas, Printing Postal Notes	$ 6.75
1917, Sept. 21.	By Order No. 192, to I. D. Metzger, Secretary, Printing and Expenses	140.91
1917, Sept. 21.	By Order No. 193, to E. A. Krusen, President, Printing, Meeting Room	76.25

1917, Sept. 21. By Order No. 194, to Ella D. Goff, Treasurer, Printing, Directory, Expenses	83.07
1917, Sept. 21. By Order No. 195, to Horace B. Ware, Entertainment Committee	400.00
1917, Sept. 21. By Order No. 196, to Mark W. Wilson, Publicity Bureau..	145.00
1917, Sept. 21. By Order No. 197, to Lula Gay, Stenographer	125.00
1917, Sept. 21. By Order No. 198, to Hahnemannian, for 340 delinquents, 50 cents each	170.00
1917, Nov. 30. By Order No. 199, to American Institute Propaganda	250.00
1917, Dec. 6. By Order No. 200, to Hahnemannian Monthly (Members for 1917, and Members in arrears, previous to 1917)	854.00
September 17, 1917, by Balance	$2,257.89
	$4,339.89

Respectfully submitted,

ELLA D. GOFF, M.D.,
Treasurer.

DR. METZGER: I move that the report be accepted and referred to the auditors. (The motion was seconded and carried.)

The report of the Board of Trustees was presented by the secretary, Dr. William C. Hunsicker, of Philadelphia. It was as follows:

Your trustees have met three times since the annual meeting at Scranton, September 17, 1917.

Two special meetings, at the call of Chairman Moreland, were held in Hahnemann College, Philadelphia, on November 11, 1917, and June 7, 1918, and the annual meeting was held in accordance with the by-laws, on September 16, 1918, in the Hotel William Penn, Pittsburgh.

The usual routine business was transacted and nothing of special interest to the society in general was presented for the trustees' consideration.

(Signed) WILLIAM C. HUNSICKER,
Secretary.

It was moved and seconded that the report be accepted and spread upon the minutes of the society. Carried.

REPORT OF THE COMMITTEE ON REGISTRATION AND STATISTICS.

BY

DR. I. D. METZGER,, PITTSBURGH, CHAIRMAN.

There was published in THE HAHNEMANNIAN MONTHLY a list of the medical societies of the State, and also of the hospitals and dispensaries of the State. This is the chief part of the duties of the Committee on Registration. THE HAHNEMANNIAN MONTHLY, being the official organ of the society, makes public these official papers; and they are kept on file by the secretary. I do not think that it would be wise to take the time to read them this morning. They are kept on file, and can be seen annually in some number of the HAHNEMANNIAN. The journal comes into the hands of all the members of the society.

It was moved and seconded that the report be accepted and spread on the minutes. Carried.

The Report of the Legislative Committee was presented by the chairman of the committee, Dr. E. A. Krusen, Norristown. It was as follows:

The report of your Legislative Committee cannot, at this meeting, amount to anything of very great importance. In the past year there has been nothing special that has required the action of the Committee on Legislation, but with the convening of our State Legislature, there will be several items that may claim a great deal of attention.

One item will be the amendment to the Workmen's Compensation Law which directly interests every physician in Pennsylvania. The Workmen's Compensation Law, as it stands today, is not meeting the just demands of the medical profession. Insurance companies are already dictating to physicians the fees they will pay for surgical attention to employees, whose employers have insured in these companies. This arrogant and dictatorial method of the insurance companies will eventually become very obnoxious and harassing to the profession.

Another important bill will be the Workmen's Health Insurance or Compulsory Health Insurance for the laboring classes. As this bill has been discussed, it is pernicious in most of its aspects and in order to have the medical profession protected, they must stand on the first line of defense or they will soon find themselves in the bondage of mercenary insurance companies.

If your Legislative Committee has work in Harrisburg this winter, it is their prayer that every physician in Pennsylvania pay prompt and earnest attention to the appeals of the committees for assistance when such appeals are made and not relegate the appeal to your scrap baskets, because whatever has been done in medical legislation, has always been for the benefit of you and your patrons and whatever there may be to do this coming winter, will be of equal import to your welfare from all sides.

Dr. E. A. Krusen, continuing after reading report: Two years ago, while we did accomplish some good, we were not able to get passed an amendment to the Workmen's Compensation Law that we had hoped to have adopted. It is universally admitted that this Workmen's Compensation Law is not satisfactory. I know of some companies that are dictating to physicians the fees that shall be paid; and under the present conditions, these fees amount to almost nothing. I hope the doctors will all think these things over seriously; and when the Legislative Committee calls their attention to them and asks for their help, I trust that they will give it.

The Old School is seriously considering the advisability of keeping a man at Harrisburg to look after the welfare of the medical profession. Unless you are there on the job, they are going to get bills through the Legislature that, although they appear to the men in the Legislature to be perfectly just, are not fair to the medical profession. Unless someone is there to present the other side of the question, the members of the Legislature do not see any reason why these bills should not be passed. If we had a man there that could do that, we should be protected. (Applause).

Dr. Moreland: You have heard the report. I trust that Dr. Krusen's words will be remembered during the year, when he calls upon you. Do not have all your enthusiasm right now. Your help will be needed, not only for the benefit of the medical profession, but for the benefit of the people as well.

REPORT OF THE ENTERTAINMENT COMMITTEE.

BY

DR. H. S. NICHOLSON, CHAIRMAN, PITTSBURGH, PA.

The Entertainment Committee has been guided by the condition of the time and the absence of our members, and have made our entertainment as modest as we could. We

have arranged for the ladies to have an afternoon tea at the Pittsburgh Field Club on Wednesday afternoon. They are to leave the Hotel William Penn at 12 o'clock, and be taken in automobiles to the club, where they will have a luncheon and spend the larger part of the afternoon there.

On Wednesday evening, the annual banquet will take place at the Pittsburgh University Club. There will be an array of entertaining speakers, men who will bring some serious aspects of the work here and about the State. That is all we have arranged for, and all we think should be arranged for.

REPORT OF THE EXHIBIT COMMITTEE.

BY

DR. E. H. POND, CHAIRMAN, PITTSBURGH, PA.

I have not much to say, except that the work of the committee this year and the results of it sort of brought to mind the fable of the mountain that was in labor and brought forth a mouse. That has been largely due to war conditions. The first question asked by the firms that are asked to exhibit is, "How much attendance are you going to have?" We have not been able to guarantee any attendance under existing conditions, and some of the firms said that they would not be here. Two firms having local representatives in Pittsburgh intended to exhibit, but both their representatives went into military work and were not able to be here. We have succeeded in landing seven exhibitors. I would suggest that you go in and, at least, appear to be interested. We need the exhibitors and a little chat with them will be a help.

REPORT OF THE WOMEN'S HOMOEOPATHIC LEAGUE.

BY

MRS. WARREN C. MERCER, PHILADELPHIA, PA.

I have not prepared a report, I thought Dr. Hassler would give it. I have not much to say; but this winter we had four students in the college. I thought that since the Government had taken over the college we would not have any men to provide for; but Dr. Pearson said that some of them would need help, because they were physically unfit for military service and would not be taken care of by the Government. Next year, we will try to take care of men of that kind. We have not done much this winter on account of war conditions. We have not tried to raise money. We were afraid to do so, because everything was war work.

SECOND SESSION.

Tuesday Afternoon, September 17, 1918.

The meeting was called to order by the President, at 3.30 P. M.

In the absence of Dr. William Hillegas, Philadelphia, Chairman of the Membership Committee, Dr. C. A. Ley, Pittsburgh, read the following list of applications for active membership in the society:

F. H. Murray, 800 Madison street, Chester, Pa.
Philip J. Lewert, 211 Jefferson avenue, Scranton, Pa.
J. Russell Bibighaus, 109 South Willow Grove Pike, Glenside, Pa.
Samuel Friedman, 501 Adams avenue, Scranton, Pa.
O. A. Vroom, Jr., 7967 Oxford avenue, Philadelphia.
Walter N. Norley, 1400 North Fifty-fourth street, Philadelphia.
N. B. Hammond, 4951 Walnut street, Philadelphia.
T. W. S. Skirving, 219 East Wister street, Philadelphia.
M. M. Mackall, 1000 Washington avenue, Monaca, Pa.
J. W. Leckie, Glover Building, Hazleton, Pa.
H. Ward Fisher, 1 Park avenue, Wilkes-Barre, Pa.
N. H. Jenkins, 460 Market street, Kingston, Pa.
J. F. Crouthamel, 29 West Broad street, Souderton, Pa.
J. H. Hedrick, Third and Poplar streets, Telford, Pa.
Joseph A. Buckwalter, 400 Walnut street, Royersford, Pa.
Arthur F. P. Huston, 1402 Federal street, Pittsburgh, Pa.
N. Fulmer Hoffman, 1602 Vine street, Philadelphia.
Verner S. Gaggin, 5445 Center avenue, Pittsburgh, Pa.

These, in the natural course of the society's by-laws, were turned over to the Board of Censors for proper action.

Dr. Moreland resumed the chair and Dr. E. A. Glenn, of Berwick, Chairman of the Committee on the President's Address, read the report of that committee which was as follows:

The committee wish to commend the learned and timely address of the society's president in the highest terms, both in spirit and substance.

As regards the specific recommendations contained therein the committee feel that they should all be officially endorsed and hence urge the following action by the society:

To go on record commending the attitude of the military authorities in reference to the control of the so-called social evil.

To endorse the attitude of the State authorities in insisting upon the reception and care of venereal cases by State-aid hospitals.

To go on record before the Pennsylvania Legislature as urging the adoption of the prohibition amendment to the National Constitution.

To instruct the Committee on Legislation to be represented in Harrisburg when the matters of Health Insurance and Workmen's Compensation are being considered, to work toward the end that the inherent rights and privileges of the medical profession as well as those of the individual be not assailed.

As regards the new spirit to arise after the war, resulting from the equally efficient service rendered and equal danger shared by both great schools of medicine, and the possibility of amalgamation, the committee recommends an attitude of broad-mindedness and toleration. Whatever is true and good in either system must survive; whatever is false and harmful must and should perish. To attest the faith that is in us at all times is meet and proper. To fail to realize that homœopathic treatment has its limitations, to refuse to avail ourselves of other rational treatment, to intolerantly and obstinately antagonize the dominant school can only result in postponing the acceptance of the immortal principles which we profess.

Signed,
Dr. Edwin A. Glenn,
Berwick, Pa.
Dr. Roland T. White,
Dr. W. F. Edmundson,
Committee.

It was moved that the report be accepted and filed and adopted as the sentiment of the society. The motion was seconded and carried. Adjourned at 6.05 P. M.

WEDNESDAY MORNING, SEPTEMBER 18TH.

Dr. Moreland appointed as members of the Resolutions Committee Drs. Charles A. Ley, W. B. Sankey, and E. A. Krusen.

Dr. Henry I. Klopp, Superintendent of the Allentown State Homœopathic Hospital, presented the following verbal report:

I want to make a brief statement of the work of the State Homœopathic Hospital. For the full period of one year, end-

ing June 1, 1918, there were 206 admissions. Of these, 190 were first admissions. That is rather pleasing, showing that there were only 16 persons who had been previously admitted, fifteen of the cases being a second admission and one, a third admission.

There were 261 discharges. That, also, is encouraging; for the reason that invariably, in an institution of this kind, it is the accumulation of those who are not discharged that increases the population and means overcrowding. Of the 267 discharged, 66 were restored to health; 45, improved; and 15, unimproved; 16 were not insane, and 125 died. That seems a rather high percentage of deaths. Nevertheless, when we take into consideration the fact that the institution, when opened, in October, 1912, had a transfer of 720 patients from other institutions, some of them having been in hospitals for not less than thirty years, we can understand that it is this accumulation that accounts for the high death rate of our institution. Some of those transferred were anywhere from seventy to ninety years of age. Of the deaths, 30 were due to general paresis of the insane; 25 to senility; 17 to arteriosclerosis; and the same number to tuberculosis.

I want to say a few words about the voluntary admissions. They are increasing in number. We are encouraging patients to come of their own accord. We believe that if the border-line cases are encouraged to come early, it will shorten the attack and lessen the danger of a complete mental break-down; so that each year we find a large number of these patients coming of their own accord. All that is necessary is for them to sign a statement that they desire to be admitted and that they agree to remain for one month. Since my last report, we started the psychiatric clinic in the city of Allentown. A few years ago I reported that we had organized one in Easton. In the latter city it has been very active. The superintendent of schools and the charity organization have taken a decided interest in it, and we believe that these clinics are a help to the community. A number of people come to the institution on the same basis as to an out-patient department of a general hospital. They come to consult us as to their condition, and we recognize that they have symptoms that point to an ultimate mental condition.

I feel that a word is due the hospital's staff in this present crisis. We have four in the medical staff in the army; two are captains, and two are first lieutenants. In addition to that, one other is preparing himself for base-hospital work. In all, since April, 1916, six have left to enter the service. That may give you some idea as to what additional responsibilities

are placed on the superintendent to keep up the standard of the institution. Under these present conditions, with the extreme difficulty in obtaining nurses and other help, it is mighty trying to keep up and improve the standard that has been established.

The institution, at last, has arrived at its three-fold function, a feature that I was very anxious to bring about when I was appointed superintendent. First, it has established a psychiatric division for the care and treatment of the hopeful type of patients; in other words, the segregation of those whom we believe can be either restored or improved. Second, there is its asylum division for the chronic cases; and third, its farm colonies. The trustees last spring, through an appropriation made by the 1917 session of the Legislature, succeeded in buying a farm in part; and will ultimately have it in its entirety. So we now have these farm colonies, where patients are placed. They are helpful in its maintenance, and enjoy great freedom and more home-like conditions. We are intending to have buildings; although, under the existing conditions of the present crisis it is practically impossible to do anything in the line of construction. But we have let a contract for a nurses' home and for buildings for nurses' training rooms and quarters for employees. On the whole, I feel that we are justified in saying that we can report progress, and that the institution is becoming known and is developing a reputation for endeavoring to do scientific work and carry our scientific treatment in the care of the unfortunate mentally diseased. (Applause).

DISCUSSION ON DR. KLOPP'S REPORT.

Dr. D. N. Landis, Perkasie: I should like to ask whether patients can be admitted on their own recognition. I was under the impression that two physicians had to sign the papers, and almost as much as pronounce them insane. A good many have an aversion to it.

Dr. I. D. Metzger, Pittsburgh: I should like to ask whether physicians in other districts of the State have an opportunity to select this hospital in preference to old school hospitals for the insane.

Dr. H. I. Klopp, Allentown: In answer to the first question, I would say that this was the point that I tried to make in regard to voluntary admissions. Patients can come to the institution and commit themselves under their own signature. All that is necessary is for them to state that they want to receive care and treatment. They only have to commit them-

selves for a month and sign a statement to that effect and that they agree to abide by the rules of the hospital.

An unfortunate feature is that the individual who does not have an income sufficient to pay seven dollars a week cannot be admitted. There is no provision for admitting a so-called indigent patient. By that, we mean where the county pays two dollars and a half, and the State the same amount, making five dollars a week. The private patient, however, must pay seven dollars a week and commit himself for one month. At the end of that time, if he wishes to remain, he must again sign such a statement. This must be repeated each month, as long as the patient wishes to remain. We have no control over the patient after the month has expired. Very often patients are deceived; but there is no opportunity for deception in this instance; because they must sign that statement in our presence and the statement must be witnessed.

As to the second question, the answer is that patients can be admitted from any part of the State. The organic law provides that patients can be admitted from any part of the Commonwealth, if there is room to accommodate them. This hospital has a district of twelve counties forming the northeast tier, beginning with Bucks, Northampton and Lehigh as the southern base. The organic law says that preference shall be given to such patients from these counties as desire homœopathic treatment. I never mean to refuse a patient from outside our district, if I can help it. Bucks, Lancaster and Lebanon counties send patients. We have two patients from Allegheny county in our institution at the present time. There is every provision in the organic law to receive and take care of patients from any part of the State.

The patients can be admitted, also, under the Act of 1883, which requires the application of either a relative or friend or the commissioner of the poor. In addition to that, the certificate of two physicians, made under oath, is necessary. That will admit a patient. It is well to make this statement, however: That this is not sufficient; we must know who is going to maintain the patient—whether the overseer, or commissioner of the poor will give a guarantee of maintenance, agreeing to give two dollars and a half a week. If we have that, we can also collect two dollars and a half a week from the Commonwealth.

There are certain counties that will not recognize the Act of 1883. Bucks, Berks and Lancaster still adhere to the Act of 1866, providing that the application must be made to the court, and the patient admitted by inquisition by an attorney, a layman and a physician. That means publicity and is slow

in its process. I prefer the Act of 1883. It is quicker and more private, and we do not have to contend with an arbitrary judge. The judge, under the Act of 1866, decides who shall pay for the maintenance of the patient, and states whether or not the relatives have sufficient means to maintain the patient.

Where the relatives have sufficient means, we require that a bond be furnished guaranteeing payments quarterly in advance. We sometimes have trouble. The people forget to pay in advance; and it is difficult to enforce this advanced payment unless we have a bond.

There is no difference made between the care and treatment of the indigent and the care and treatment of the private patient. The internal lay-out of the hospital is mainly in dormitories, with the exception of the psychiatric division. When the patient is received, the physician decides where he or she is to be placed. Very often the relatives come and ask, "Is our patient going to have a private room?" They do not ask, "Is the patient going to get well?" With us, it is a question of what we can do to either restore or improve the patient; and my twenty-three years plus of experience convinces me that the mentally sick in an institution of this kind are better when cared for in dormitories. Their mind is diverted by what the other patients are doing, and they have less time to dwell on their own imaginings, delusions and hallucinations. In a single room, with nothing to look at but the walls, there is nothing to divert their minds. We make no difference in the treatment of the private and of the indigent patients. I do not know the majority of the private patients. I do not want to know who they are. I want to feel that we are doing everything possible to restore the patient and return him to the community.

It was moved by Dr. Metzger that the report be received and placed in the minutes. The motion was seconded and carried.

Nomination of officers took place at 11 A. M.

Dr. Clarence Bartlett, of Philadelphia, nominated for the office of President of the Society during the ensuing year, Dr. Harry S. Weaver, of Philadelphia, who had been a faithful and efficient member of the Society for a number of years, but who was absent from this session on account of the illness of his wife. For First Vice-President, Dr. H. B. Bryson, of Pittsburgh, was nominated; for Second Vice-President, Dr. J. S. Stitzel, of Hollidaysburg. For Secretary and Treasurer, the present incumbents of these offices were renominated. Dr. Metzger declined, but was induced to reconsider his decision

by Dr. Hunsicker. For Necrologist, Dr. Metzger nominated Dr. G. Harlan Wells, of Philadelphia. For Censor, Dr. R. T. White, Pittsburgh, North Side, was nominated. For State Society editor of THE HAHNEMANNIAN MONTHLY, Dr. Ralph Bernstein, of Philadelphia, the present incumbent, was renominated.

On the Board of Trustees there were four vacancies to be filled, three caused by expiration of the term of office, and one by the death of Dr. Maddux. Drs. Henry I. Klopp, Allentown, George B. Moreland, Pittsburgh, and Clarence Bartlett, Philadelphia, were nominated for three years; and Dr. William Hillegas, of Philadelphia, for two years, to fill the unexpired term of Dr. Maddux.

THURSDAY MORNING, SEPTEMBER 19, 1918.

The meeting was called to order by President Moreland at 10.30 A. M. Dr. Ella D. Goff, Pittsburgh, presented a letter of resignation from Dr. H. L. Stambach, Santa Barbara, Cal., who had been a member of the Society since 1881.

Dr. I. D. Metzger, Pittsburgh, made a motion that the name of Dr. Stambach be transferred from the list of active members to that of honorary members. The motion was seconded and carried.

The report of the Board of Censors being favorable, the eighteen names of applicants for membership were balloted upon and elected.

Eleven o'clock, the time set for the election of officers in the by-laws, having arrived, and there being no contests, Dr. E. A. Krusen, of Norristown, moved that the secretary be authorized to cast the ballot of the Society for the officers nominated by the members at the morning session of the previous day. The motion was seconded and carried.

The secretary reported that he had cast the ballot, and they were declared elected.

CLOSING BUSINESS MEETING.

Dr. Charles A. Ley, Pittsburgh, Chairman of the Resolutions Committee, read the following report:

The Resolutions Committee beg to present the following report:

We extend the thanks and commendation of this Society

to our retiring president, Dr. George B. Moreland, for presenting such an excellent program to the State Society, and for the very good attendance at all of the sessions, in the face of the effects of this great war in depleting our ranks in the membership of the State Society. We also offer him our best wishes and Godspeed in his proposed work in the Medical Reserve Corps of the United States Army, for which he leaves us at the close of these meetings. We also endorse most heartily the President's stand on the liquor question.

We propose a resolution of thanks to the Chamber of Commerce of Pittsburgh for the use of their rooms and for the many courtesies which they have extended to us during the meetings.

We recommend that the President of this Society be requested to appoint a committee of three to act as a Committee of Arbitration, with power to appoint sub-committees to adjust any complaints or misunderstandings from the members of the Homœopathic Medical Society of Pennsylvania, who are enlisted in the Medical Reserve Corps of the United States Army or Navy, and to secure for them, as far as possible, just representation.

We recommend that the Pennsylvania Homœopathic Medical Society, through its secretary, convey to the Pennsylvania State Department of Health, their appreciation in sending Dr. John L. Laird to our meeting, and also that we endorse its activities with reference to the control and prevention of venereal diseases.

We commend the Allegheny County Medical Society for its reception and entertainment of the visiting members, their wives and also the visitors to the meetings of the Homœopathic Medical Society of Pennsylvania.

This committee also desires that the secretary express in writing the thanks of the Society to Dr. J. Richey Horner, of Cleveland, Ohio, for his very instructive talk on the work of the committee of the American Institute of Homœopathy for securing a permanent endowment fund; and also, for the very able and interesting address of Dr. C. E. Sawyer, of Marion, Ohio, representing the Council of National Defense in Washington.

The secretary of this Society is hereby instructed to express in writing to the press, the Women's Homœopathic League, to our exhibitors, to the Bureau of Health, and the Board of Education of Pittsburgh, and to the representatives of the Board of Health of New York City, who have so ably

contributed to the interest and success of our meetings, our sincere appreciation of their services.

Respectfully submitted,
CHARLES A. LEY, Chairman,
E. A. KRUSEN,
B. W. SANKEY.

It was moved and seconded that the Report of the Committee on Resolutions be accepted, and the instructions contained therein carried out. Carried.

On motion, the Society adjourned at 4.35 P. M. to meet at the call of the President and Secretary during the following year, the time and place not yet having been decided.

LEDUM PALUSTRE IN THE TREATMENT OF ACNE.—Facial acne, whether acne rosacea, or the common garden variety, acne vulgaris, is always a stubborn disease to prescribe for, particularly when the patient behind the acne has few or no symptoms upon which to base the selection of a remedy. Under the latter circumstances prescribing is apt to be more or less in the nature of guesswork, or else one is compelled to resort to the method of old Jahr, as outlined in his "Forty Years' Practice," and give a series of remedies, commencing with *Sulphur*, following with *Calcarea*, then *Lycopodium*, and so on. This method is not a bad one, albeit hit or miss, yet sometimes productive of surprisingly good results.

Since Jahr's time, however, we have learned to know the value of such remedies as *Arsenicum brom.*, *Kali brom.*, etc., but we must not forget such old standbys as *Eugenia jambos* and *Hepar sulphur*, which have an honorable record in this condition.

Ledum is to be thought of where the blotches are of large size, red and prominent, especially upon the nose and cheeks, often in those who are overfond of alcoholic liquors and who are easily heated. *Ledum* likes cold air, or applications; anything cold is agreeable to the *Ledum* patient, and in this respect *Ledum* resembles *Pulsatilla* and *Lac caninum* especially, both of which remedies find relief from cold air or applications to painful inflamed parts.

A young married woman in most excellent general health, but who had developed a very unsightly acne of the cheeks, with marked redness of the face, presented absolutely nothing subjective on which to base a prescription. Several remedies, supposedly homœopathic to the eruption as near as could be determined, were prescribed in vain. The appearance of the eruption, its fiery, angry redness and the suspicion—pretty well founded—that her father had been a convivial imbiber of the cup that cheers and may inebriate, together with the important fact previously overlooked, that this patient abhorred hot weather, but delighted in cold, led finally to the choice of *Ledum*, which in a few doses of the higher potencies cured most pleasantly.

Thus after all we really had found a symptom totality upon which to prescribe and one embracing both *subjective* and *objective symptoms*. And so, once more is impressed upon us the importance of the art of case taking, without which no man can become a successful prescriber.—*Editorial, Hom. Recorder.*

EDITORIAL

HOSPITAL RECORDS AND THE STATE BOARD.

The following communication addressed to the Trustees of Hahnemann Hospital has a direct bearing on the management of all hospitals, and especially of those located in Pennsylvania. For years we have been strong advocates of good record taking in our institutions. It is to be regretted that ten hospitals have been stricken from the approved list because of delinquency, and it is to be hoped that we shall see them restored in another year.

Board of Managers, Hahnemann Hospital, Philadelphia, Pa.:

Dear Sirs: A year ago the Bureau notified the hospitals of the commonwealth approved for internship that their records in many instances were not such as could be approved in the case of hospitals conducting intern instruction and that at a future inspection if a proper system, properly conducted, was not found installed, the Bureau would be forced to remove the name of the hospital so offending from the list approved for intern teaching.

The inspection referred to has just been completed, with the result that the Bureau has been forced, in spite of the fact that they had supplied all hospitals with sample copies of a recommended system, to notify ten hospitals that they were so far from satisfying the requirements of the Bureau that their names would not appear on the next list of approved hospitals. In so many other hospitals has it been found that certain important elements of a correct system have been omitted, either by carelessness or intent, that the Bureau feels compelled once more and for the last time to call the attention of Boards of Managers to the indifference of their employees, especially in the supervision and the conduct of record-keeping.

With this object in view, again a complete sample set of

scientific records is enclosed with this communication. Within the next six months a reinspection will be made, especial attention being paid to the record system then instituted and maintained. If any element of the enclosed system be found lacking, the hospital will be considered incapable of giving intern education and will forthwith be removed from the approved list.

It is not the intent of the Bureau in any way to insist upon the use of the exact sheets and cards in this particular system. These samples are merely submitted as a minimum of satisfactory data of record. In case a hospital has adopted another system, the Bureau merely expects its coming inspection to reveal the fact that the system installed is equally adequate and that the subject matter of each sheet, as furnished, is represented in the chosen system. Opinions vary as to the wording on the several sheets and cards, and the Bureau desires to leave wide latitude in this respect. There can be no variation of opinion, however, as to the value and necessity of each of the various elements which go to make up the system.

For further information, it may be explained, that no system can prove successful which is not placed in the hands of a historian whose chief duty is to see that each and every element of the system is present and properly filled out before the record is filed.

Moreover, no system can be considered competent which is not filed in cabinets permanently installed in the office or in a conveniently located filing room. Records tied up in a bundle, packed away in boxes, or stored in the cellar or attic, cannot be considered sufficiently available for proper service.

The adverse opinion of the superintendent or of one of the medical staff cannot exonerate managers for their failure to provide such elements of the system as the diagnosis card file, the end-result card file, the obstetric sheets or a cross-index between the laboratory and x-ray records and the office sheets, which the Bureau considers essential.

The attention of the Boards of Managers is also called to the fact that unless the superintendent is in sympathy with the proper installation of a record system and sees to it that the historian fully understands his or her duty and conscientiously performs the same, only failure may be expected.

This letter is being sent to each hospital on the approved

list with the request that the Board of Managers shall instruct its superintendent to carefully review their existing system so that at the coming inspection the record system may be found complete and satisfactory. The Bureau is particularly anxious to augment the efficiency of these hospitals in medical training and that no injustice shall be rendered to any worthy hospital.

Very truly yours,

JNO. M. BALDY, M.D.,

President, Bureau of Medical Education and Licensure.

ACCIDENT INSURANCE ONCE MORE.

A FEW months ago we took occasion to speak of the action of insurance companies in connection with their treatment of certain claims. We believe now as we did then that quibbling over claims will untimately prove to be a means of ruining what is a necessary business in the community. We have no sympathy whatever with claimants of doubtful character nor with their claims; but when claims are made in all sincerity and there is nothing but a quibbling of words as a basis for fighting them, we feel more or less resentful. Apropos of this subject is found the report of a case in the Medicolegal Department of the *Journal of the American Medical Association.* We quote the article in its entirety:

"The United States District Court in Iowa holds that where a man insured by the defendant association died from intentionally pricking a small pimple on his upper lip with a gold scarf pin that he took from his necktie, his lip at the place becoming immediately infected with staphyllococcic infection from the scarf pin, which infection spread and caused his death in a few days, it must be considered that he died as result of bodily injuries received 'through external violent and accidental means,' within the terms of the insurance policy. The court says that it may be taken as settled by the great weight of authorities that, under language of this kind in a policy, it is not sufficient that the result shall be accidental, but that the means must be accidental, as well as the result, which the court thinks was true in this case. If the injury resulted from the pin alone, and there was no proof that the pin was

infected, the accidental result would not be covered by the policy; but the insured clearly used something he did not intend to use. He used not only the pin, but an infected pin—a poisoned pin. This infection was such that it could not in the nature of things be discovered by him without perhaps a microscopic examination. In the court's opinion the means were entirely accidental. Nor was the defendant exempted from liability under its general covenant to pay, by a provision of its by-laws that the 'association shall not be liable . . .for accidental death . . . resulting wholly or partially, directly or indirectly, from . . . local or general infection' (except when such infection or inflammation results from a visible or open wound caused by external, violent or accidental means). The fact that the cocci entered the wound in its making, as agreed by the parties, ought not to make any difference in the construction of this provision of the contract." C. B.

THE MEDICAL EDITOR AND THE ALCOHOL QUESTION.

In an address read before the American Medical Editors' Association, June 12, 1918, Geo. W. Mackenzie made a strong plea for a positive stand by the members of the association on the question of alcohol. Since the time of that meeting the country has gone officially dry through an Act of Congress and the question whether prohibition should be supported by the medical profession or whether it involves a matter of personal rights and liberty to be decided on this point and not upon purely technical grounds no longer exists. Mackenzie has attacked the problem in his characteristic aggressive and thorough manner and presents some interesting data and convincing arguments. He rightly says that at the time of reading his paper, the country still being at war, the alcohol question was one of the most important to be settled. "If the alcohol question is not an important one," he asks, "why is it that the employer of labor seeks the abstainer in preference to the addict, the more so since the enactment of the compensation laws? Did the railroad and steamship companies put the ban on the use of alcohol by their employees arbitrarily or were they prompted by experience bought at a very high price? Had not all the corporations begun putting the ban on alcohol prior to the war?"

Mackenzie cites the number of bushels of grain used annually in the brewing of beer and distillation of whiskey; the number of men employed by the breweries who could be employed at more useful work (during the war); the amount of coal burned by the breweries and the annual drink bill of the United States—$2,400,000,000.

The following figures showing the effect of drinking upon vital statistics are quoted from a well known Life Insurance Company:

"Abstainers show a death rate 37 per cent. lower than moderate drinkers; 32 per cent. lower than steady users drinking less than three glasses of beer or two whiskeys daily; and 50 per cent. lower than those using more than three glasses of beer or two whiskeys daily."

In closing his address Mackenzie says: "We have heard the verdict against alcohol by corporations employing labor, educators who have followed and compared the mortality rate of graduates (users and non-users of alcohol), diplomats and soldiers, national administrators, Governors of States that were once wet but are since dry, Life Insurance Companies, the verdict of prison wardens, superintendents of almshouses, social workers and economists. As a class, how little we physicians have done to render a verdict on this important question as compared with that done by every other class of society. Alcohol belongs to the habit-forming drugs and as such should be put on the list of habit-forming drugs. It should be subjected to the same restrictions under the Pure Food and Drug Act." C. S. R.

THE INCOME TAX AND PHYSICIANS.

Burdensome as the income tax may be, it has, nevertheless, taught physicians business methods. All the bills hitherto enacted have taxed net incomes and not the gross business. It has been the general custom of physicians to regard income and gross business as synonymous terms. The income tax has taught them the fallacy of past practices in bookkeeping, for if one but looks into the subject carefully he must note that medical work is by no means all profit, for the expenses are many and at times large. In but few instances do the expenses attendant upon medical work fall below 25 per cent., and in small practices, they may be as high as 50 per cent.

We are aware that a few doctors have claimed a method of economy that reduced the expense to as low as 10 per cent., which we feel shows some management.

The two great items are office rent and automobile. Included under the former are light and heat. These are fixed charges independent of the amount of business done, as also are chauffeur, office assistant, telephone, etc. In prosperous times they make a smaller percentage of the gross business than they do in "lean years." But other items include books, journals, medicines, society dues, attendance upon society meetings, hospital subscriptions, charities, .etc.

Revenue collectors have been inclined to liberality in interpreting the laws, and have recognized the general principle that any procedure which does not encourage liberality in equipment on the part of the physician is contrary to public benefit. Physicians should join their regularly incorporated societies and should attend the meetings thereof.

Modern practice of medicine demands that the physician supply himself with proper equipment in his office. At times, this may be quite extensive according to the demands of his particular line of practice, *e. g.,* X-ray apparatus, laboratory outfit, etc., may run into hundreds if not thousands of dollars. Such equipment is to be classed as business machinery, and it is the usual business method to charge off each year an estimated 10 per cent. for depreciation in value. Such a depreciation, however, is not sufficient for the medical man, much of his machinery being thoroughly worn out long before the 10 years of its estimated life of usefulness, while still others become antiquated within two or three years. Thus the life of an automobile is but three years, and X-ray apparatus and laboratory outfits become inadequate or out of date in a limited time. The Government is very fair, and being fair it should be protected. A proper amount is permitted to be charged off each year according to the demands of the situation, but this amount in the aggregate for the time the equipment is in service, shall never exceed the first cost of the same. For example, automobiles depreciate in value each year according to schedules established by the trade and the insurance companies, leaving but little at the end of the three years. The owner cannot keep charging off depreciation for an indefinite period. Books depreciate in value rapidly; so rapidly, indeed, that after a variable period they are worthless, except-

ing as so much old paper at a few cents per pound. Each physician must study this question out for himself, not only from the standpoint of the income tax, but also because it will teach him just what it costs him to practice his profession, and protect himself in the matter of charges to his clients. We have grave doubts concerning the ability of anyone being able to practice medicine at an expense of 10 per cent. To maintain an automobile even of the simplest kind at less than $600 appears to be an absurdity. Office rents (which usually include light and heat) can seldom be had for less than one dollar per square foot annual rental, and the cost in some locations may go as high as $3.00. With reception, consulting and examining rooms and laboratory, 500 square feet of office space seems to be a respectable minimum. On the items of automobile and rent alone, the expenses thus amount to $1,100, which on the 10 per cent. basis means a gross business of $11,000, which after all is some practice. There are many other fixed charges to be considered, such as insurance (including fire, theft, indemnity, and automobile), chauffeur, and possibly a secretary or assistant, which must be considered, so that it is not unreasonable to believe that with prosperous physicians and surgeons, the total cost of doing business amounts to 30 per cent., or more, in every instance. B.

Old Tuberculin in the Treatment of Pulmonary Tuberculosis.—Bartlett has made some clinical use of Koch's Old Tuberculin iix, prepared for him by Mr. Borneman, pharmacist at Hahnemann Hospital. In its administration, tablet triturate of 1 grain each are used, and doses are given by the mouth at intervals ranging from once in 3 hours, to 3 times daily. He thinks that he has seen some good results from the method, and offers the suggestion for what it may be worth. The oral use of tuberculin in tuberculosis is not new, as the remedy has been reported upon favorably by Latham, of England. Many years ago, Dr. Jos. C. Guernsey, working in Hahnemann Hospital Wards, frequently prescribed the old homœopathic preparation known as tuberculin, and contended at that time that the symptomatology of the advanced tuberculous subject was so complicated, that a true symptomatic prescription was an impossibility. The suggestion is one which should be worked out in the absence of anything better. The internal administration of tuberculin must not be accepted as a remedy without the simultaneous use of the orthodox hygienic measures, open air, properly supervised rest, and diet.

GLEANINGS

Sleep Conditions and Interference with Respiration as Factors in the Production of Chorea Minor.—Brockway (*Long Island Medical Journal*, Dec. 1918) calls attention to the prevalence of certain peculiarities in sleep and respiration among choreic children. Many of his patients had adenoids and enlarged tonsils; a large number slept in poorly ventilated rooms or small bedrooms. The habit of sleeping with the bed clothes over the nose and mouth was noted a number of times.

Brockway does not dispute the generally accepted close relationship of rheumatic infection with chorea. He believes, however, that faulty oxidation leads to the excessive formation of uric acid in the system and that a susceptibility to rheumatic infection is thus induced. Since the tonsils and adenoids are generally conceded to be the usual focus for a rheumatic infection, especially in children, their mechanical interference with respiration must be looked upon as a minor role if of any influence whatsoever in the etiology of chorea. Naturally a child with adenoids that is a poor breather becomes anemic and more subject to neurotic disturbances than a perfectly healthy child and when harboring a rheumatic infection will therefore be more likely to develop chorea.

A plea for the removal of tonsils and adenoids even in the presence of choreic symptoms is made by the writer in closing his paper.—*C. S. Raue.*

The Medical Complications and Sequelae of Influenza.—Dr. Thomas McCrea gave an interesting *resume* of the clinical course and complications of influenza as observed by him during the recent epidemic, in a paper read before the Philadelphia County Medical Society, reported in the *Pennsylvania Medical Journal*, January 1919. The essayist calls attention to the fact that many of the statements made regarding the recent epidemic would not have been made if physicians read medical history a little more.

"Whatever its etiology, influenza is a disease which occurs about three times in a century. Naturally a great many medical men do not have a chance to see it more than once; some see it twice; none, three times. Consequently it comes as a more or less new disease to the great majority of the profession. Considering that the disease is a multiple infection, the wonder is that complications occur so rarely. Edema of the lungs is one of the most striking complications among those of the respiratory tract; when associated with pneumonia, however, death, which usually occurs, is the result of the pneumonia and toxemia. Pneumonia is a feature of the disease rather than a complication of influenza. Following the epidemic of 1890 we saw a number of curious, atypical cases of pneumonia, shifting from one apex to another in a way to make one question his diagnosis. A generation has grown up which knows nothing about that phenomenon and we shall probably see in the next two or three years a number of cases diagnosed tuberculosis when

we really have a postepidemic influenzal pneumonia. There has been also in many cases a peculiar persistence of consolidation. The longest time in which I have observed this has been nine weeks. It then entirely disappeared. The occurrence in many cases of slightly bloody serous effusion, small in amount and which has been responsible for many of the atypical cases, has been one of the particularly interesting signs in the pleura. A curious feature of the influenzal pneumonia cases had been the occurrence of fibrinous pleurisy after the recovery of the patient. The question arises whether this is a tuberculous pleurisy, but I am inclined to regard it as a remnant of the disease.

"In many of these cases, with the well marked percussion note, there is practically no pain. In the majority of cases of influenza the patient went through the attack without serious heart involvement. Personally I saw endocarditis only once; pericarditis impressed us as to its rarity. Of particular importance is the condition of the heart after the attack. In comparison with the epidemic of 1890 we are having, apparently, not 1 per cent. of the cardiac disturbances after the disease is over that we had at that time. A striking feature of the vasomotor system is the curious cyanosis which comes on quite early. The low blood pressure was striking and formed a feature of considerable prognostic importance. The early nose-bleed was not in my experience of favorable prognostic import. I saw only one patient with severe intestinal hemorrhage who recovered. The severe toxic condition in these cases was probably akin to that seen in yellow fever. In all the cases dermatitis purpura was extreme. Jaundice was very common if one looked for it, being largely of a low grade. In a few cases it looked like the jaundice of acute yellow atrophy."—*C. S. Raue.*

The Significance of Tuberculosis in Infants and Children.—Alfred F. Hess (*Jour. Amer. Med. Ass.*, Jan. 11, 1919) has prepared tables from the Department of Health Statistics and other sources designed to show the great mortality from tuberculosis in the first year of life. He emphasizes the fact that deaths from tuberculosis in no year exceed those of the first year of life. After the second year there is a marked falling off in the number of deaths; however, it is during the period of childhood that infection with tuberculosis mainly takes place, the pulmonary manifestations not appearing until early adult life as a rule. Dr. Hess applied the tuberculin test to 400 children at the Home for Hebrew Infants and found that 7.8% of infants under 6 months were infected. At the age of one year, 15% reacted positively to the von Pirquet test. At 2 yrs., there were 17% positive reactions; at 3 yrs. 31% and from 4 to 5 yrs. 43%.

Hess believes that the infant is peculiarly susceptible to tuberculosis and that the close association of the infant with the mother explains the frequency of infection of the infant by a tubercular mother. He summarizes his paper as follows:

"Statistics of infant mortality that show the ratio of deaths from tuberculosis compared to other diseases do not give a true conception of the importance of tuberculosis at this period of life. To arrive at a better understanding of this problem, we must prepare figures showing the absolute number of deaths annually. We then find that in no one year do the deaths from tuberculosis exceed those of the first year of life. This great loss is due in part to the peculiar susceptibility of infants, in part to the fact that they receive an exceptionally large amount of the infective agent. The dosage

is large, not only in an absolute sense, in the number of bacilli conveyed by the mother or other infected individual, but also from a relative point of view, when we consider the comparatively small size and weight of the baby. Bovine infection plays a part that is minor but not negligible. In view of the not inconsiderable mortality that has been shown to be occasioned by the bovine type of bacillus, it would be well if cultural studies of tuberculosis in infants should be carried out from time to time, in order to gain an insight into the degree to which milk employed for infant feeding is contaminated by virulent tubercle bacilli."—*C. S. Raue.*

Prostatic Cyst.—E. Castano (*Rev. Asoc. Med. Argent.* Buenos Aires, 1918, XXVIII, 317) recognizes three varieties of prostatic cysts: those produced by obstruction of the prostatic ducts with retention of secretion; those formed in the prostatic, vesical or sinus; and hydatid cysts. He reports a case in a man of 56 yrs. In this case, the cyst had deteriorated into a carcinomatous prostate. The operation done was a transvesical prostatectomy, the tumor being approached through the anterior face of the neck of the bladder. Complete enucleation was found impracticable, and it was decided to treat the condition by means of radium. The man died a few months afterwards, apparently from the development of metastasis. Castano states that the symptoms of cyst are similar to those of prostatic hypertrophy. There was retention of urine and, toward the end, dysuria and hematuria. Cystoscopy showed the development of the prostatic tubes and Marion's sign; and the irregularities in the hypertrophied lobes confirmed the diagnosis.

—*Leon T. Ashcraft.*

Factors Determining Mortality in Prostatectomy.—I. Simons (*Interst. M. J.* 1918, XXV, 469) states that the causes of death after prostatectomy may be classified as follows: (1) Those apparently unavoidable; such as pulmonary embolism and cerebral thrombosis or embolism. (2) Those partly avoidable by preoperative study and preparation of the patient; such as renal insufficiency and urosepsis. (3) Those partly avoidable by operative skill and methods; such as shock, hemorrhage and pneumonia.

The incidence of the first group of causes is not high. Therefore, their occurrence cannot account for the marked difference of mortality percentages given by various surgeons. The preoperative study and preoperative preparation of the patient necessary to avoid the second group of causes should include the use of the phenolsulphonephthalein test; blood chemistry; cystoscopy; diet; urotropin, together with sodium benzoate and boric acid, if there is an alkaline cystitis; catheterization and bladder lavage. When these preparatory measures are carefully carried out, the one stage operation is the operation of choice in the opinion of the author.

The principal things contraindicating operation are, the poor general condition of the patient, a fall in blood pressure, a low urea and phenolsulphonephthalein excretion and an acute epididymo-orchitis on the institution of the measures of preparation.

Simons enumerates the following as measures that should be employed to avoid the third group of causes—shock, hemorrhage and pneumonia—as follows: The cystotomy should be performed under local anesthesia, the incision being made high up. Haste is unnecessary and also undesirable. The enucleation of the prostate should be done under gas and oxygen. Spinal

anesthesia is less dangerous than ether. In this part of the operation speed is necessary. The after-treatment is very important and should include avoidance of the supine position, the rapid resumption of full diet, removal of drainage as soon as possible and early insertion of a retention urethral catheter.—*Leon T. Ashcraft.*

Calculus of the Prostate.—G. Frank Lydston (*American Journal of Surgery*) states that prostatic concretions are composed chiefly of calcic phosphate with some ammonio-magnesic phosphate. Small calculi do not produce any trouble, but exceptionally large ones cause a certain degree of mechanical irritation and obstruction to the flow of urine. Small prostatic stones, if discovered accidentally while making a rectal examination of the prostate, should not be disturbed, unless they are productive of symptoms. In that event, they may be removed by perineal section. In some rare cases, they may give rise to ulceration and abscess, and be discharged into the urethra, the bladder, the perineum or the rectum. These concretions are easily mistaken for malignant disease or tuberculosis. They are frequently associated with adenomatous enlargement.—*Leon T. Ashcraft.*

The Endometrium in Health and in Disease.—The matters stil in debate relating to the endometrium have given opportunity for Curtes's admirable article. Only some of his comments and conclusions can be given:

In nullipara, without gross evidence and history of pelvic infection, the endometrium is free from bacteria; it is also microscopically normal. Normal pregnancy does not appear to change this condition. In cases of chronic infection where bacteria are obtainable from the endometrium, almost all have salpingitis. Except in pyometra and recent exploration of the uterus, the endometrium almost never shows bacteria, except when there is infection of adjacent pelvic tissues. Chronic endometritis, *per se*, with bacteria present in smears and cultures, is practically to be ruled out as a clinical entity. The gonococcus is the organism most commonly found. Streptococci and diplococci are less common. The author found the microscopic evidence of endometritis to coincide with cultural results. The bacteria disappear first, followed in turn by the polynuclear leucocytes, plasma cells, and other mononuclear cells. Bacteria have seldom been found unless there is infiltration with polynuclear leucocytes in addition to plasma and round cells. . . . . Hitschmann and Adler deserve much credit for demonstrating physiological cyclic changes in the endometrium, but it is unfortunate they claim inflammatory hyperplasia does not occur. Tissue possesses an inherent tendency to hyperplasia under the stimulus of inflammation and there is no evident reason why the endometrium should be an exception to this rule. Histological study points to the existence of true inflammatory hyperplastic endometritis. . . . Concerning intrauterine therapy the author says that chronic infection of the corpus uteri speaks for almost certain involvement of other pelvic organs. Intrauterine applications are therefore of little avail, for the most important focus of infection is well beyond their reach. . . . In the cervix are glands, prolific in activity, especially adapted to mucous secretion. It is here we will do well to look for infection, and it is against discharge from the cervix that treatment can be efficiently directed. —*Surg. Gyn. and Obs.*, xxvi, 178.—*Theodore J. Gramm.*

The Action of Radium on Cancer.—Dr. H. H. Janeway, working at the Memorial Hospital of New York City, has summarized his results in 422 cancer cases treated within the last two years. An unusual susceptibility to the action of radium is shown by lymphosarcoma and the cellular carcinomata of the testicle. In the former class retrogressions could be produced in the advanced cases, and in two more recent cases no recurrence appeared one year after treatment, from which it seems likely that a cure may be likely in certain cases of lymphosarcoma when treatment is applied in an early stage.

The most remarkable results obtained by the use of radium was in cellular carcinoma of the testis or ovary. Cases are reported in which a single application to the abdomen caused the disappearance of the metastatic abdominal tumors remaining after removal of the cancerous testicle. Radium seems to act in almost the same specific manner in enlarged spleen in myelogenous leukæmia with a corresponding reduction in the white blood count and improvement in the patient's general condition. Probably its beneficial action in leukæmia is unsurpassed by any other agent. While these results may not prove permanent in leukæmia it cannot yet be determined how long radium will prolong life in this disease. Very favorable results were also obtained in uterine fibroids, and ,of course, in skin epitheliomata. . . In all cases the favorable end-result is inversely proportional to the age of the tumor treated. This fact deserves emphasis, because it has become increasingly evident that, if radium fills a field of usefulness in the treatment of cancer, it is in the earlier stages when the disease is still circumscribed.—*Surg. Gyn. and Obs.*, xxvi, 233.—*Theodore J. Gramm.*

The Treatment of Eclampsia at the Glasgow Royal Maternity in 1916, as reported by W. F. Hewitt (Chicago) is entirely expectant and with good results.

The antepartum cases receive routine treatment consisting of gastric lavage with sodium bicarbonate followed by magnesium sulphate; water with dextrose and alkalis by rectum by the drop method; venesection in the high blood pressure cases; transfusion; and external heat applied by means of a copper tank. In the cases with a rapid pulse, "Vevatone" a Parke-Davis preparation of veratrum viride was given. One or two ampoules were usually sufficient. No treatment of the convulsions save the clothes pin, unless for prolonged insomnia. If there was no improvement in 24 to 36 hours, emptying the uterus was considered. Cases in labor were similarly treated unless other complications were present, until labor could be easily terminated as by forceps.—*Surg. Gyn. and Obs.*, Vol. xxvi, 238.—*Theodore J. Gramm.*

Potassium Permanganate in the Treatment of Anaerobic Infection of Wounds.—Gurd (London) thinks that unless adequate operative and mechanical treatment of wounds infected with the bacillus aerogenes capsulatus is carried out, no antiseptic employed as a dressing will be of value. Prevention and control of infection by this bacterium is extremely important for surgeons working in casualty clearing stations.

In the author's hands potassium permanganate of from three to one-half per cent. has proved more effective in the prophylaxis and treatment of wound infection by the gas producing anærobes than other preparations. It should be used whenever an infection has commenced, and in all extensively lacerated wounds, especially if accompanied by bone comminution or injury of important vessels.

The author gives his reasons for the selection of potassium permanganate: it is cheap; it is a powerful oxidizing agent; it is an effective germicide; it is astringent; it does not macerate epithelium; it is a mild irritant and stimulates blood circulation; it causes little pain; it induces the prompt appearance of healthy granulations; and it does not stain the tissues.

The results in a large group of cases have been uniformly good.—*Int. Abstr. Surg.; Lary. Gyn. and Obs.*, Vol. XXVI, 405.—*Theodore J. Gramm.*

Renal Diabetes.—Cases of renal diabetes appear to offer a much more favorable prognosis than does diabetes mellitus. Their management, moreover, is of considerable importance, as by recognition of the true state of affairs, the patient is saved much annoyance and possible suffering by unwise dietetic restrictions. Bailey has made a careful study of the subject, reporting two cases which were carefully studied, and offers the following conclusions:

Renal diabetes, or better "renal glycuresis" should be broadly considered as a condition of glycuresis not dependent upon a temporary increase of blood sugar in an individual free from symptoms of diabetes mellitus. The condition can be recognized by morning synchronous blood and urine sugar tests, the specimens being collected before the patient has had anything to eat or drink.

At least two types can be recognized: (1) Cases with normal or subnormal blood sugar and glycuresis, which is greatly influenced by blood sugar changes; (2) cases with a constant glycuresis which varies with the rate of urinary excretion and is little influenced by blood sugar changes. The possibility of renal glycuresis being in some cases a congenital condition; the question whether or not the clinical course remains permanently free from symptoms of diabetes mellitus; the lack of reserve energy which such a condition produces if severe; the direct effects upon the kidney of continued excretion of sugar are interesting points to be observed in this condition.

Symptomatically it is noted that the urinary sugar is but little influenced by dietetic measures.—*American Journal of the Medical Sciences*, February 1919.—*Clarence Bartlett.*

The Graham Steell Murmur in Mitral Stenosis.—The Graham Steell murmur is a diastolic murmur heard at the left border of the sternum in some cases of mitral stenosis. It may be described as a soft blowing murmur diastolic in time, which replaces the second sound at the pulmonic area. It may be heard when standing, but frequently it is missed entirely in the erect posture, and is brought out particularly well when the patient lies on his back. Occasionally, on the other hand, it is heard only when the patient stands. It is affected by respiration but there is no definiteness in this. In some cases it is heard at the end of complete inspiration; in other cases at the end of expiration, and again in the mid-period of quiet breathing. Exercise may intensify the murmur, and the patient should be examined following some effort. In some cases exerting pressure with the stethoscope will enable one to recognize the murmur. The duration of the murmur is variable—it may occupy the whole of the diastolic period or only a part thereof. There is very little if any transmission.

Major E. H. Goodman has studied the Graham Steell phenomenon in 36 cases of mitral stenosis observed among soldiers, and in 24 cases of pure stenosis it was present 9 times or 37.5%; in 12 cases with insufficiency, it

was heard 3 times or 25%. It would seem therefore that it is heard more frequently in the pure cases than in those associated with mitral insufficiency.

The interest attached to the Graham Steell murmur lies in the fact that it may make the differential diagnosis between aortic insufficiency with a Flint murmur and a mitral stenosis with a Graham Steell murmur a matter of some difficulty. In searching for the murmur it is recommended that the patient be examined in various positions, in various phases of respiration and before and after exercise.—*American Journal of the Medical Sciences*, February, 1919.—*Clarence Bartlett.*

Calomel in the Treatment of Influenza.—Acting upon the assumption that influenza is a toxæmia, W. L. Mann thought that the disease might be combated, at least to some extent, by the stimulation of hepatic function by the administration of small doses of calomel. He therefore adopted the following procedures: (1) Calomel ¼ grain given every ½ hour for six or eight doses followed by a mild dose of sulphate of magnesia, or in severe cases with an enema. (2) Calomel one-tenth grain was then given four times a day for three or four days. In many cases where the fever tended to show secondary rises or to remain high, the administration of two grains of calomel in fractional doses was repeated with rather good results.

Of this plan of treatment the author remarks that it has given better results than those employed in wards other than those controlled by him, and that the medical officers were unanimous in their opinion that beneficial action has resulted from its use. The best results were obtained in the early treatment of cases by this method. The cases of influenza that had progressed for some days failed to respond to calomel as readily as the incipient cases.—*Medical Record*, February 8, 1919.

(We have not reproduced the above abstract for the purpose of giving our approval thereof. It points a lesson in that it shows that in some quarters almost any wild theory may be advanced as a basis of therapeutics. We take that it beneficial results have followed because small doses of calomel are seldom if ever harmful, while current methods of treatment by means of acetphenatidin and aspirin to say nothing of other drugs are absolutely pernicious. It is seldom indeed that a case of influenza will terminate fatally if absolute rest is enforced from the beginning and medication is limited to proper doses of gelsemium, bryonia, eupatorium, veratrum viride, aconite, ferrum phos., and other remedies known to members of our school of therapeutics.)—*Clarence Bartlett.*

Hernia of the Bladder.—S. G. Gay (*American Journal of Surgery*) classifies vesical hernias into three types: the extra peritoneal; the intra peritoneal; and the paraperitoneal (a portion of the viscus being covered with peritoneum of the sac). He states that true primary vesical hernias may be considered as pathological curiosities. In the etiology, the factors of importance are all conditions that increase abdominal pressure, physiological or pathological states that distend the abdominal cavity, diseases associated with frequent increased intra-abdominal pressure, and conditions that weaken the abdominal walls. The symptoms are frequent and painful micturition, pain at the end of difficult urination and increased swelling with accumulation of urine and a decrease with voiding. The condition may not be recognized prior to operation, or may be discovered only at autopsy.

When operating upon the bladder, the surgeon should always be careful that he does not incise the bladder under the impression that he is opening a hernial sac. Radical operations for vesical hernia are practically without mortality. When death occurs, it is commonly due to complications. If the bladder is injured during the surgical procedure and the operator is not certain whether the accident has occurred, a sound may be passed and brought out at the site of the injury. The wound should be carefully sutured with non-absorbable material, and free drainage provided. The immediate closure of the bladder wound is important.

Gunshot Wounds of the Abdomen.—Gottman, at the Memphis General Hospital, has reported one year's experience, that is 50 cases, of gunshot injuries of the abdomen. He concludes that perforative gunshot wounds of the abdomen is a surgical condition demanding surgical treatment. Shock is a contra-indication to immediate operation. Shock is the prime cause of death in these cases. The patient being in good or fair condition the sooner operation is done the better. Active hemorrhage, unless coming from the liver, demands surgical interference irrespective of condition. Wounds of the liver alone had best be let alone. In doubtful cases, the condition of the patient permitting, perform exploratory incision, under local anæsthesia if need be and if hollow viscera are perforated repair them under general anæsthesia. A few moments' thought as to the probable course of the bullet will furnish a fair estimate of the injury as well as indicate the site of operation in most cases. Bullet holes are valuable for drainage tubes. Drainage and counter-drainage in these cases is conservative surgery. Evisceration is to be condemned. Piecemeal inspection from a fixed point and closure should be the rule. Early evacuation of the bowel is the rule in favorable cases. The introduction of 2 ounces of concentrated solution of epsom salts by means of a catheter inserted into the bowel through the highest point of perforation may, by favoring early evacuation, allay the tendency toward paretic distention which is always present, more or less, in these cases. The same result could be accomplished by injecting the solution into the bowel by puncture with a needle, or it might be left in the stomach after giving it a thorough washing at the close of anæsthesia. Catgut, good, smooth, fine, and chrominized for through-and-through approximation is best. A hœmoglobin estimation may help in the differentiation between shock and hemorrhage.—*Surg. Gyn. and Obs.*, xxvi, 217.

A Suggestion in the Management of Paralysis Agitans.—The treatment of paralysis agitans has always proven in the highest degree unsatisfactory. About all that can be done is symptomatic prescribing and attention to the general health. Many of the suggestions made in literature would be regarded as farcical were it not for the tragedy attendant upon a hopeless illness. Quite recently, it has been suggested by Swift that the patient practice muscular movements of a simple nature gone through very slowly at the rate of 1 foot per second with strong concentration on the movement while it is in progress. The object is not muscular development but development of control over muscles. The movements should be regular and they should be prescribed definitely. It does not seem necessary to advise any special set of exercises, the sole object being the development of nervous control.—*Boston Medical and Surgical Journal*, November 21, 1918.

Tomato Plant Dermatitis.—There is a constantly increasing list of plants and substances capable of producing dermatitis venenata. E. S. Lain has now shown that to susceptible individuals the common tomato plant is toxic. The type of dermatitis produced by this plant does not differ materially from the dermatitis caused by many other poisonous plants such as rhus toxicodendron and primrose. The eruption makes its presence known by a mild stinging sensation which in a few hours is followed by an erythema of the exposed surfaces.—*J. A. M. A.*, Oct. 5, 1918. *Ralph Bernstein.*

A New Diagnostic Sign of Foreign Body in the Trachea or Bronchi, the Asthmatoid Wheeze.—Chevalier Jackson has added a new sign diagnostic of foreign body in the upper air passages. He has designated it the "asthmatoid wheeze," and let us express parenthetically our gratitude that he has not called it the "Jackson Sign." He has studied this phenomenon now in 62 cases, and finds it of inestimable value, especially in those cases in which the foreign body is not opaque to the X-ray.

The asthmatoid wheeze may be defined as a sound heard during expiration by placing the ear in front of the patient's mouth. It resembles the wheezing of the asthma patient, but is drier. It is caused by the vibration of the air passing the foreign body in the bronchus. It is elicited by placing the ear in front of the open mouth of the patient while breathing deeply and regularly in and out. If the wheezing is not noticed, the patient is asked to carry respiration to the extreme limit as though endeavoring to expel all the residual air in the lungs. In a number of instances, the wheezing has been apparent only at the termination of this forced expiration. In many other instances, the wheezing is so loud that it was noticed all over the room. In eliciting it, care is needed to distinguish between a wheezing caused by secretion and a wheezing caused by a foreign body. This cannot always be done with certainty. Usually the sounds of secretion disappear after coughing and expectoration, while the wheeze of a foreign body remains after the most violent and persistent coughing unless the foreign body has shifted.

The pitch and loudness of the sound seem to depend upon the size, position and shape of the body. In one case, the wheeze terminated in a a sharp smacking sound, due to the impact of the suddenly arrested body which had been dislodged.

The asthmatoid wheeze possesses no localizing value. The mechanism of the sound is of course mere conjecture. The main question involved is its diagnostic value. The sign is of less value if negative than if positive. It is often more marked after coughing out all of the secretion of which the patient can rid himself, though this is not always the case. It is of more value directly as to the recent occurrence of the case. In cases of long standing bronchitis, tuberculosis and other pulmonary diseases associated with abundant secretions, there may be a wheezing sound audible on auscultation at the open mouth that may simulate the true asthmatoid wheeze.

The asthmatoid wheeze was present in no case in which a smooth foreign body was so tightly wedged in a bronchus that no air could pass it. Smoothness or roughness of surface seems important chiefly as they influence tightness of inspiration. In the author's opinion, the asthmatoid wheeze and aural auscultation are very promising additions to our diagnostic means in cases of foreign bodies in the trachea and bronchi.—*American Journal of the Medical Sciences*, November, 1918.

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CHOREA.

BY

JNO. E. WILSON, M.D., NEW YORK CITY,

Professor of Neurology in the New York Homœopathic Medical College.

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CHOREA MINOR or SYDENHAM'S CHOREA.—This is an acute disease of the nervous system, evidenced by the progressive development of all varieties of irregular, involuntary, and inco-ordinate movements of the muscular apparatus, manifested even while the person is intentionally at rest. It begins in the face or an extremity, and extends over a considerable portion of the body, affecting the tongue with a jerking, darting movement on attempts at protrusion, and not being preceded or accompanied by evidences of an organic brain or nervous disease. It may be preceded or followed by rheumatoid symptoms, and endocarditis is a frequent complication. The attacks generally last about four weeks, and one-third of the cases show recurrence, to which females are more liable. These recurrences are apt to be three in number, each one being shorter, and the interval being longer than the preceding one. The symptom last remaining is a twitching of the face, or a protrusion of the tongue.

ETIOLOGY.—Sydenham's Chorea is quite universally acknowledged to be an acute infectious disease of self-limited duration, but there is not the same unanimity in defining the infecting agent, or agreeing upon the point of its incidence. Mettler (*Chicago Med. Recorder,* Mar. 15, 1903), says that

the multiplicity of type proves that all choreas are disturbances of the functional activity of the upper motor neuron, and that chorea is not a disease, but a symptom of the presence of some infection which has produced changes in the central nervous system, ranging all the way from a molecular or chemical change, to a gross lesion. Syphilis, in rare instances, may be the cause of chorea of both the focal and diffuse type. Sachs says that it may be the expression of a general septic or toxic condition, and Berlin (*Western Medical Times,* Nov., 1916) believes that it is an infection of a definite kind, because he has found streptococcus vaccine to be curative. Dick and Rothstein (*J. A. M. A.,* Oct. 11, 1913) report that a streptococcus was isolated from the throat of a choreic patient of five years' standing. Similar organisms have been recovered from recent cases. These have been cultivated enough to have developed definite characteristics. A dog into which they were intravenously injected, developed chorea within 12 hours. Starr believes that a micro-organism produces chorea, endocarditis, or rheumatism, according to the individual susceptibility in brain, heart, or joints. In this connection Abt and Levinson (*J. A. M. A.,* Nov. 4, 1916) make an interesting report on 226 cases between the ages of 3½ to 18 years. This was 2 per cent. of all children treated in that period. Contrary to general opinion, the relation of the disease to rheumatic manifestations was marked historically in only 13. Tonsilitis did not bear an important relation, but infectious disease was observed to precede the onset of chorea in a large proportion of the cases. There was, however, no apparent causal relation of this to the disease. Marfan argues that chorea is due to an organic change in the cerebellum, since choreics always show adiadokokinesis, which is a symptom of organic damage to the cerebellum, and states that the persistence of this symptom after apparent recovery indicates recurrence. Heredity is a powerful factor, and malnutrition is evidenced as a common inciting cause from the fact that these patients have a low blood-count, and weakness is always present, and it may be a more predominant symptom than twitching. Its etiological potency is also proved by the great improvement and frequent cure of the disease by rest and full feeding. Personally, I would say that actual joint rheumatism, either antecedent or complicating, has been rare, but some degree of endocarditis was almost universal. There appears

to be a direct causal connection between chorea minor and disturbances of the internal secretions during puberty (Albrecht, *Zeitschrift f. Gyn.* No. 3, Bd. 76, 1916).

Diagnosis.—Just as in the not far-distant past there was a vast mass of neuro-pathological material which was grouped under the inclusive term "myelitis," so there was a similar agglomeration termed "chorea." There are certain variants of the Sydenham syndrome which while true choreas, and mere modifications of a similar pathological process, have a different course and prognosis. In addition to these variants, there are many disturbances of the cerebral and cerebellar cortex, and the static motor pathways, caused by meningitis, encephalitis, new growths, concussions, hemorrhages, toxemias, and marked fatigues, which produce choreic movements, and which have been termed choreas, to the confusion of the saints. Most of these affections are so obviously different from the chorea of Sydenham that a mere glance at the patient, or a reference to his history will immediately segregate them, but they should be kept before our minds as possible alternatives. The modifications of Sydenham's chorea, and syndromes most closely allied to it are the following:

Hemichorea.—This is a manifestation where the symptoms are confined to one-half the body. In some cases it is not inherently impossible that this localization depends upon a one-sided teleological fault, but generally it is frankly hysterical, although I had one case in which the general neuropathic condition suggested a developmental fault.

Limp or Paralytic Chorea.—This is where the muscles are relaxed, giving the appearance of paralysis. It may be generalized, or confined to one or two extremities, but the reflexes are unchanged, and the prognosis is good. The apparent cause is an acute toxemia, and generally affects children of from 6 to 7 years, but one of my cases was a girl of 16, and the etiology was not apparent.

Chorea Gravis or Fatal Chorea.—This is a form where the movements are increased in area and severity, so that the patient is thrown about with such violence that he cannot speak, swallow, sit in a chair, or even remain upon a bed, and the problem is whether he will perish from exhaustion of physical forces or from inanition. Mental aberration is common. I have seen such cases which were bruised from head to foot by their jactitation of the whole body, and with

the skin worn from the ankles, elbows, and knees, by the constant friction. In the literature of these cases I feel that there is some confusion of pathological entities. Some of these cases are severe choreas, while others are cases of meningo-encephalitis. In the cases brought to autopsy, we here and there find a case where encephalitis has been demonstrated, and that leads me to touch upon the role of lumbar puncture and examinations of the blood. Lymphocytosis and leucocytosis are evidences of organic disease, and are not found in the functional disturbance which forms the caption of this paper. Lepine, Giraud, and J. Rabattu (*Med. Rec.,* Dec. 24, 1910) report the case of a female patient, 49 years of age, in whom a diffuse meningo-encephalitis manifested itself at first by a choreic syndrome, and terminated fatally with septicemic symptoms. The lesions were established by autopsy. This case presented the characteristics similar to those of fatal choreas which have been reported.

Chorea Insaniens.—There is a form of chorea which is marked by varying choreic and mental disturbances. Mild choreas may rapidly pass into this form under the influence of undue nervous strain and excitement, and Koplik suggests that some forms of treatment are adapted to conduce to this result. Faring (*Brit. Med. Jour.,* Apr. 27, 1907) reports a case which merits relation. A girl of 17 years had rheumatic pains in the legs for over a fortnight, when chorea developed. There was a mitral systolic murmur on admission, which persisted up to death on the ninth day; pulse 80 up to the last three days, when it was 100; then 130; finally 140; temperature was normal or subnormal until the eighth day, when it rose to 103 to 104. The chorea was slight for 48 hours; then needed two nurses to control it for the other seven days. The psychic phenomena at the first overshadowed the motor, and differed from the acute delirium of fever, or acute mania, by the absence of incoherent speech, and wild garrulity. Up to the last two or three days of life the physician's visits would quiet her. Shouting would cease, movements became quieter, questions were comprehended, replies were intelligent. Medical treatment was absolutely futile. On two days hyoscyamine hydrobromate 1-200 gr. once repeated calmed the violence of the delirium, but was futile in the last two days of life. Morphine was useless, but chlorotone was most useful. The systolic mitral murmur which on

admission had been considered to be probably due to a rheumatic endocarditis of some two or three weeks duration, must in the light of the autopsy be judged to have been dynamic, and the result of an acute ventricular dilatation. It is not to be explained on the grounds generally accepted, namely, anemia and choreic cardiac excitement. The heart was somewhat atrophic, but showed no other changes.

Chorea Gravidum or Chorea of Pregnancy.—In twelve out of 15 cases this has been found to have been preceded by a like affection about the time of puberty, but I had under my personal charge a girl who from hardship and malnutrition had two or three light attacks between the twelfth and sixteenth years. She married at about her eighteenth year, and had her first baby within the year. Conditions were still hard, and yet she went safely through her pregnancy, and developed a mild attack many months after. It usually occurs to a primipara, generally appears about the third month, and may be so slight as to consist in a few spasmodic movements only, but if pregnancy is not terminated it may become so violent as to lead to a fatal issue from inanition and lack of rest—chorea gravis. The symptoms usually disappear in three to four months, but may recur at parturition, or during lactation. The danger to the mother is usually not very great, but abortion and premature labor are not unknown. The patients are apt to suffer from hallucinations, and sometimes go into a paranoid state. They show irritability, seclusiveness, persecutory ideas, characteristic speech defects, and at times a progressively increasing dementia. These cases have the walk of paralysis agitans, and the spasms are a mixture of the major and the minor type. There is no rhythm to the contraction, and they act like jumping-jacks.

Chorea Chronica.—This is a persistent choreic condition, resulting from the inability of the brain to resist organic change from the infection which is in most other cases a temporary invasion. This, in my experience, sometimes takes the paralytic or limp form. The same condition ensues at times in old age from senile involution, and is known then as chorea senilis.

Chorea Huntingtonii (also classified at times as Chronic Chorea). This is always adult, and usually late adult in incidence, hereditary, quite universal in its involve-

ment of the motor system, and always characterized by mental failure, and hallucinatory or maniacal episodes.

CHOREA DEGENERANS OF BRISSAUD.—This is a presenile breakdown in neuropathic and unstable individuals.

The two diseases following are not choreas, nor are they tics, but are spasmodic affections of specific types.

CHOREA ELECTRICA OF DUBINI.—This is a spasmodic disease rarely seen in this country, but almost exclusively in Italy, and is probably gouty or malarial in origin. It is characterized by fever, convulsions, and especially pain in the upper spine, and pulmonary complications are usually present, and it is fatal in from a few days to a few weeks. The rapidly repeated twitching is constant and general in its distribution.

CHOREA ELECTRICA OF HENOCH AND BERGERON.—This is confined to childhood, and takes three forms: 1, Electrica propria; 2, Chorea electrica hysterica; 3, Chorea electrica epileptica. These are easily differentiated as a rule, although the first two may be confused, while the third may simulate epilepsy in many respects. The muscular twitchings rapidly recur in the muscles of the neck and shoulder, as though induced by an electric current, but cease during sleep. It does not disable the muscles, but does disable the patients occupationally. It seems to depend upon autointoxication, and treatment of the digestive tract usually cures the condition.

POST-HEMIPLEGIC CHOREA.—This has a history and the diagnostic marks of a preceding hemiplegia, or diplegia. There is spasticity, and an increase in the deep reflexes.

CHOREA EPILEPTICA.—The chorea of general paresis, of the psychoses, of the cerebral palsies, both congenital, and of the adult, all are suggested as possible complications in these conditions. In tabes alone we may find that a crisis may be choreiform, with or without pain.

TICS OR HABIT SPASMS.—To recapitulate: Choreic movements are purposeless, and are generally distributed over a considerable portion of the musculature, and perhaps involve the whole body. Mental irritability is conspicuous, but there is never coprolalia, nor echolalia. Tics or habit spasms are movements which are purposeful in conception, while they are purposeless in execution: they are exhibited in a single muscle or a co-ordinated group of muscles, except where the condition eventuates in such a generalized exhaustion of the nervous system that a generalized motor discharge is provoked.

Coprolalia and echolalia are common, and while the patients may become hysterical, they are not conspicuously irritable. There is a laryngeal condition which is so near the borderline that it is found indifferently described as laryngeal chorea, or laryngeal tic. These are the people who grunt and groan and bark like dogs, but judged by the test of coprolalia, or echolalia, they fall into the domain of the tics convulsive.

Intoxications from poisonous metals or toxins may appear like it, but the muscular fault in such cases is a tremor rather than a jactitation, and there are associated symptoms from the primary intoxication.

Hysteria.—This gives rise to rhythmical, not jerking motions, and there are usually stigmata, or a history of antecedent seizures. The patient is apt to be older, and there is a history of psychic causation.

Multiple Sclerosis.—This has similar movements, but they are volitional. While the eyes twitch in chorea, there is no defined nystagmus, nor is there ankle-clonus.

Friedreich's Ataxia.—Here there is an unsteadiness of the legs and in gait which simulates the gait and station of chorea, but the peculiarity of inco-ordination does not appear while the patient is seated and at rest, as it does in chorea. The deep reflexes are apt to be diminished, and the disease is familial.

Athetosis.—These movements are slow and even, and not jerky, although they are still in evidence while the patient is at rest. They are always exclusively distal; confined to the hands and feet.

Cerebellar Syndrome.—The cerebellar syndrome has choreiform movements in its symptomatology, but the complete picture cannot be duplicated in even the most aggravated case of Sydenham's chorea, for in the cerebellar syndrome we have ataxia in addition to adiadokoninesis, vertigo, nystagmus, hypotonia, or atonia, with exaggerated reflexes. The Stewart and Holmes reflex is quite diagnostic. Pull against the flexed arm, suddenly relax the strain; the released arm will jerk toward the body, and then there is a quick recoil. This recoil is lacking in cerebellar disease. Other symptoms are asthenia, asynergia, cerebellar fits, which are tetanus-like convulsions, holding the body in extended rigidity, forced movements, speech disturbances.

Prognosis.—Recovery is the rule in cases occurring be-

fore the tenth year, but there is a fatality reported in cases at large of about 2½ per cent. Autopsy often fails to show any adequate cause of death. Complicated cases die from exhaustion, from excessive muscular effort, inability to take food, endocarditis, and other heart complications, cerebral hemorrhage, and concurrent affections. The chorea of pregnancy is fatal in 25 per cent. of the cases.

TREATMENT.—The cardinal facts to remember in any plan of treatment are that the patient is asthenic and neurasthenic. This is shown by the physical weakness and irritability, and in many cases this has seemed to me to result from malnutrition, unhygienic surroundings, and lack of sufficient sleep. Upon that basis and also to provide a group of controls for the study of the efficiency of various methods of medication, I have treated many cases solely by enforced rest, and full-feeding, with the result that the chorea promptly subsided. If in addition skilful massage could be added, I believe that without specific use of drugs anyone could successfully treat the large majority of cases drawn from the lower strata of the population. I make this distinction, because I have not found chorea to be a disease that is frequent among the well-to-do, except where the heredity is bad, or there has been a conspicuous lack of sense in the care of growing children. When we have children of the better class, we have a chorea based upon a more intricate pathology, and our mechanism must be correspondingly elaborate, and while apparently we have more parental intelligence to which to make our appeal, I sometimes wonder if ignorance is not easier to combat than a distorted intelligence. However simple or severe be the case, I think that a reconstructive and preventive hygiene is absolutely essential. If I can get a free hand, I arouse the child at 7 o'clock, if it sleeps so long, and give a cup of cocoa; then in a half hour a warm bath with a cold rub-down, followed by a rest in bed for an hour, and then breakfast of the lighter cereals, milk, and eggs. Then rest and sleep, if possible. In the middle of the morning, a cup of milk or cocoa, or a bread and butter sandwich *if the child is hungry*. Dinner in the middle of the day, and meat in moderation, and fruit, with plenty of fresh vegetables. I then encourage sleep. A lunch similar to the one in the morning, in the afternoon, and a generous supper, so long as it is bread and milk, or bread and butter, with perhaps a little jam, or

canned fruit. The bowels do not give much trouble, but if so, I use the milk of magnesia, or nux vomica. This is supposed to be a light case, and therefore I allow the child to busy itself with light play, and a few friends, but neither to exhaustion. If the case is so severe as to be very inco-ordinate, perhaps with a speech defect, I limit its activities very greatly, and keep it in bed the greater part of the day, but entire seclusion in a darkened room is a remedy of dubious utility in cases of this grade, and may be actually dangerous to the mentality. The other children of the family or the mother are harmless distractions, in my opinion. Here we should think of the sedative effects of definite hydrotherapy. In the morning the child should get a glass of milk and some crackers, or cocoa and toast, and after an hour's rest, should be given a pack at 100°, the temperature of which should be gradually lowered by the application of cold water to the blanket and the pack. Then pack and all are wrapped in a warm blanket for 15 minutes; then blanket and pack are removed, and a good reaction is obtained by a brisk rubbing with cold water. The skin will glow after this, and a complete rest is to be taken for an hour or so, when the second and full breakfast is given. In the most severe uncomplicated cases, where there is actual danger that the patient may injure himself, or die from inanition and exhaustion all sorts of railed-in cribs and beds have been suggested, but in my experience if the patient is placed upon two mattresses put side by side upon the floor, they do not injure themselves, and actually seem to be much quieter from the psychic influence of the absence of limitations. Padding of the knees, ankles, and elbows is still necessary. These cases do not seem to me to be benefited by baths or massage, as the efforts to carry out the procedure seem to exhaust them more than the treatment helps. Food is essential, given by any method possible. Here we are principally dependent for our results upon remedies and food, and the reduction of muscular strain, and isolation; avoidance of bright light and noise are advantages. In the convalescing patient of all grades, I employ massage, if obtainable, and diseased tonsils and teeth are treated appropriately. In the mild cases, where they are rather wild in jactitation, and suggest hysteria, I give mygale lasiodora, perhaps nux vomica or ignatia. In the marked cases I have found agaracin 2x, long ago suggested to me by our friend Bartlett, to be one

of the most frequently indicated and dependable remedies. I give a 5 grain powder every two or three hours. I see cases at times which are helped by belladonna, generally the tincture; hyoscyamus when I find the proper mental state. I have prescribed many remedies symptomatically with fair success, but rely mostly on those with a pathological basis. Actea racemosa may be useful, and I have had success with arsenic in potency. I use arsenic in physiological doses rather infrequently, either in the hospital, or in private practice, but more often in the clinic, and probably with methods like your own. I use Fowler's solution, 3 drops 3 times a day initially, increasing a drop a dose daily until nausea or puffing of the eyelids warns me to stop. I then either stop a day or so, beginning where I left off or drop back to the original dose and start over again. Three repetitions of the series usually cure the case. If Fowler's solution is to be employed, I think that a fresh solution should be insisted upon, as evaporation may increase the strength by a third beyond what the official formula is supposed to represent. My experience with those awful cases which I have dwelt upon to some extent has been limited to a very few. Happily they have recovered, treated by what I might term the open method, by food gotten in by any practicable method and by stramonium in the tincture, 5 drops in a half glass of water and a teaspoonful given every hour or oftener. One of these cases was thoroughly pigmented by arsenic when she came into my hands, she certainly improved as soon as she was given the freedom of the floor and I seemed to see an immediate benefit from the remedy. For cardiac lesions rest is a basic remedy, an icebag may be tolerated in two-hour periods by some; bryonia, cactus, kalmia and opium comprise my armamentarium as a rule.

I have not seen all the cases in the world and I have always liked to look over the fence and see what the other fellow does when he gets into a scrape, therefore I am going to tell you of some of the treatments which I have seen, heard or read about. Some of these I present only to condemn, some of them do not appear to be the result of very wonderful cerebration but some do show the acute insight or the lucky guess of some man who has found himself in the awful hole in which anyone of us may find ourselves before the passing of the next twenty-four hours.

Arsenic.—The arsenical chapter reads queerly, and

shows the widest range of opinion. On the one hand, Koplik absolutely condemns it, but seems to be driven to use it. He says that it should never be given when there is a slight or moderate cardiac involvement, as it interferes with appetite, and aggravates the cardiac condition. Also, while we are led to expect nausea, vomiting, pigmentation of the skin, oedema of the eyelids, and cutaneous eruptions as necessary signs of intolerance, he has seen albumen and casts under moderate dosage, with none of the expected warnings. If arsenic must be given, the urine should be examined daily. He also points out that from its use a neuritis may be added to a chorea, and said that it became so common in one hospital that its use was suspended. His method is an initial dose of 1 drop, 3 times a day, increased by *one drop a day*, and thinks that the dose even to older children should not exceed 10 drops 3 times a day.

The Comby-Flatov treatment has for its theorem the employment of arsenic in enormous doses, but avoiding the evil effects of the drug by the administration of arsenious acid in the place of Fowler's solution, which is an arsenate of potassium. One case is quoted as substantiating the differentiation. A child of 8 years, after a very considerable saturation with arsenic of the ordinary forms was intolerant to 9 drops of Fowler's solution, but could safely bear a dose representing 1-5 grain of acid. He reports that four weeks after termination of treatment, one case developed what he termed an arsenical myelitis. Began with paraplegia, five days later incontinence of urine and feces, incomplete paralysis of the upper extremities, loss of tendon reflexes, complete degeneration of the electrical reaction in nerves and muscles, and loss of sensibility. The case recovered after a disability lasting three weeks. The medicament is given in a solution of 1-1000, making 1 dram represent 1-15th grain of the acid. Two and one-half drams equal to 9 grammes of this solution are diluted with 6 tablespoonfuls of water, and of this new solution a tablespoonful is given every two hours, diluted with milk. On the second day 3 3-4 drams=15 grammes, are given in the same way. On the third day 5 drams=20 grammes are used, and on the fourth day 6 1-4 drams=25 grammes. On the fifth day 7 1-2 drams=30 grammes; and on the sixth day 8 3-4 drams=35 grammes; while on the seventh day 10 drams=40 grammes are given. Beginning with the eighth

day the dose is progressively reduced by 5 grammes daily, so that the entire treatment takes just two weeks, the patient during which time has taken about 6 grains of arsenious acid, and the initial dose represents 16 drops of Fowler's solution. Hutinel and Barbonneix doubt the wisdom of so large a dose, and employing the same solution increase it by 1-4 of a dram daily, do not give it to children of under 6, and the maximum dose is 4 1-2 teaspoonfuls. Hassin and Hersfield, Chicago, use this latter modification, and report great success, and also report the cure of one case of Gilles de la Tourette's disease—general tic complicated by chorea. They state that while Comby's cases were all under hospital care, they used it broadcast among the poorest class of patients.

Weil (*Progres Médical,* Jan. 6, 1912) also favors arsenious acid=arsenicum trioxide. He uses it in the form of "arsenical butter," the daily amount of which is spread upon bread, and eaten at the principal meal of the day. He has adopted this means of administration from his observation that arsenic, when combined with fats, produced little or no toxic effect upon animals. He mixes the appropriate amount required for the whole treatment—about .18 grammes, and adds to it 3.6 grammes chloride of sodium or milk sugar, and each 0.1 gramme contains .005 grammes of arsenious acid. On the first day 0.1 gramme is given triturated in 10 grammes of butter; on the second day 0.2; on the third day, 0.3; then 0.4; then 0.5; after which the dose is again reduced. Rest in bed and a milk diet are, moreover, not necessary with this form of treatment.

An interesting combination is suggested by Clive Riviere. He holds that there are three kinds of cases: First, those benefited by arsenic—by ergot (?); those susceptible to arsenic; and a few needing a combination of the two. In the majority of cases improvement begins at once. A violent chorea seems to be the only one unbenefited. His mixture is:

> Extract of ergot.....1 dram
> Liquor arsenicalis.....3 minims
> Increase the dose as seems necessary.

Antipyrine.—R. Oppenheim (*Progres Médical,* Mar. 22, 1913) states that in mild cases no arsenic is needed. Diet should be carefully supervised, sleep made 14 to 16 hours a day, regulation of the bowels, give a general wash with hot

water each morning followed by a dry rubbing, and give twice daily a tablespoonful of the following mixture:

Antypyrine ..... drams, 2½
Tr. belladonna foliorum ..... drops, 40
Syrupi auranti florum ..... ounces, 2
Aquae distillatae, q. s. ad. ..... ounces, 5, Misce.

In very severe cases arsenic and larger doses of the antipyrine. If the antipyrine does not prove effective in a few days give chloral in full doses.

Chlorali hydrati ..... dram, ½ to 1
Potassii bromidi ..... dram, ¼ to ½
Codeinae sulphatis ..... grain 2-3
Syrupi ..... drams, 5
Aquae distillatae, q. s. ad. ..... ounces, 3½
Misce. To be taken in 24 hours in tablespoonful doses.

When infectious phenomena or cardiac complications accompany chorea, sodium salicylate, in daily doses of from 30 to 60 grains, should be added to these measures.

Salicylates.—There is no unanimity of opinion about the salicylates, although aspirin has been the drug of preference in some hospitals. Charles (*Dublin Jour. Medical Sciences,* Nov. 11, 1911) condemns the salicylates, as they depress the vitality, and thus increase the susceptibility of the system to the circulating toxins. Weber (*Centralblattf Innere Medicin,* Aug. 3, 1912). On account of his belief that chorea is due to a rheumatic infection of the central nervous system, Weber administers to children as much as from 1.5-3 grammes of sodium salicylate, or .6 to 2 grammes of salicylic acid per diem. Other measures have proved beneficial, as sweating, light baths, etc. When the disease was initiated by sore throat, he removed the tonsils; this favors rapid recovery, and avoids rheumatic complications and relapses. Next in favor is phenol salicylate; antipyrin; acetphenetidin in doses of from 1 to 3 grammes was found to be more useful than arsenic, which is suitable only for those who are rundown and anemic, and do not respond to the salicylates as well as the more recent cases. Abt and Levinson, to whom reference was previously made, report that rest, isolation, baths, and the salicylates seemed the most satisfactory treatment. Arsenic seemed without effect.

Trional.—Charles (*Dublin Jour. Med. Sci.,* Nov. 11, 1911) advises the free use of trional. He isolates the patients, keeps them in bed, and gives them a highly nutritious diet, from which tea and coffee are excluded. John Allen (*Amer. Journ. Med. Sci.,* Feb. 19, 1910) advises arsenic up to 10 drops, but prefers aspirin up to 10 grains every 4 hours. Trional may be tried in doses of 5 grains 3 times a day as an initial dose for a child over 5 years of age.

Chloretone.—Wynter (*Med. Record,* Oct. 3, 1908) says that chloretone is as specific to chorea as are the salicylates to rheumatism. He reports 30 cases of all grades of intensity, and all varieties of previous duration from a few days to 3 years. He gives 5 grains in 1-2 ounce of petroleum emulsion every 4, 6, or 8 hours, according to the severity of the symptoms. In 2, 3, or 4 days the dose is reduced by a half, and given less often. The average duration of treatment is 9 days. In many cases the movements ceased in 4, 6, or 7 days, and a few not until the twelfth day or more. About half the children had cardiac disease, but the average stay in the hospital was only 3 weeks.

Lumbar Puncture.—Richardiere and Lemaire (*Bulletin Soc. Pediatrists*) feel that lumbar puncture does good, and that with good technique lymphocytosis is always found. This, in their view, sustains their contention that the disease has an organic basis. Porter, of San Francisco, advises this also, but he affirms that the cell-count and globulin were always normal, and that such findings discounted the theory of infection as a cause of the disease.

Horse Serum.—Porter (above) advised the Goodman treatment, which involves the puncture of the spine, the abstraction of a quantity of cerebro-spinal fluid, and the injection of a smaller amount of normal horse-serum. For this treatment he claims brilliant results. La Fetra, of New York, has tried this treatment in Bellevue, and got results of the same character in the treated cases, and in the controls.

Streptococcus Vaccine.—Berlin (*Western Medical Times,* Nov., 1916) has obtained good results by the use of streptococcus vaccine.

Salvarsan.—Mettler advises this if the case is proved syphilitic, and says that it may help other cases. Von Bokey (*Deutsche Med. Wochenschrift,* Jan. 19, 1911) injected 0.2 millegramme into the front part of the thorax, under the arch

of the ribs, in a girl of 8 years. In three days she was greatly improved; at the end of two weeks the symptoms had practically disappeared, and in one month she could be said to have been cured.

Meyerhoffer treated a girl of 7 years with arsenic and aspirin, from September, 1908, up to winter, with no improvement. She then contracted scarlet fever, and the chorea ceased only to return; then aspirin and rest in bed produced some improvement, but when she was up the addition of bromides would not control the condition. April 27, 1911, she received .25 millegramme salvarsan in the right interscapular region, followed by an increase (of the symptoms?). May 27, .5 millegramme was injected in the deep muscles of the thigh, and the chorea disappeared.

Pierre Marie, and Charles Chatelin (*Bull. Acad. Med.*, Dec. 10, 1912) report the intravenous use of neosalvarsan in 25 severe and moderately severe cases. The oldest patient was 19, and the youngest 8. The average number of injections was 4 at weekly intervals, and the dose was .2 milligramme, while .35 milligramme was given to adolescents only. No untoward symptoms occurred, except a moderate degree of malaise in the few cases where salvarsan was employed. Choreic movements markedly decreased after the second injection, especially marked after the third, and complete recovery soon followed, the total duration of the disease being reduced to 3 to 4 weeks, compared with from 6 weeks to 3 months in those otherwise treated. The general condition was improved, gain in appetite and weight, even when choreic movements had not been greatly benefited.

Dana (*Med. Record*, Sept. 7, 1912) reports the case of a girl of 18 in Bellevue, who exhibited a typical violent chorea with clonic movements involving all the muscles. She was unable to walk, or use her arms, and her speech was unintelligible. She had no fever, her mind was clear, so that she could not have been a case of chorea insaniens, but was simply a severe type of the Sydenham class. She was given the ordinary treatment by isolation, arsenic, and packs, but after a week she was still very violent and agitated, and could not control her muscles, nor feed herself. She was given a half dose of salvarsan, and at the end of 24 hours she was so much better that she could feed herself, talk distinctly, and thence she went on to a rapid convalescence. The Wassermann reaction was negative.

Apomorphine.—M. G. Tull (*N. Y. Med. Jour.*, Mar. 11, 1905) reports a female case 15 years: she represented a most severe case, involving station, phonation, and all motor functions, with a severe generalized morbilliform rash over the whole body. She had been uninfluenced by 10-grain doses of veronal, large doses of strontium bromide, the three valerianates, opium by suppository; finally a pill of

Morphine acetate ..... 1-6 grain
Camphor ..... 1 grain
Ext. Hyoscyamus Eng. ..... 1 grain
Creosote ..... 1-3 grain
One every 1, 2, to 3 hours, p. r. n. No effect.

Arsenic was increased to 16 gtts. t. i. d. without benefit. She was then given apomorphia gr. 1-40 with relief in three minutes from movements which had been violent for two weeks. The drug was continued by mouth, gr. 1-20 every three hours, and arsenic also continued, with steady improvement and cure in 10 days, so that the patient could travel, and a summer of good health ensued.

Salt-free Diet.—It is said that a salt-free diet is almost curative in itself.

DISCUSSION.

Dr. Weston D. Bayley: While listening to this discourse of my amiable colleague, and wondering how I could best fulfill my obligation to open this discussion, the thought came to mind, how unpleasant it must be for an artist when he paints and puts on exhibition a picture which represents his conception and ideals of a subject, to have his colleagues crowd around and insist on a change in the background, or a darkening of this spot, or a heightening of this color, or insist on other changes in what is to him a studied and finished product. Yet this is exactly what is expected when we are required to discuss an essay such as has just been presented. Fortunately in this case there is no room for radical dissent and I can only wish that the subject had been produced on a larger canvas, instead of the essayist yielding to the instinct for brevity.

From the beginning of our knowledge of the bacterial causes of disease, chorea has been regarded as an infectious disease, because it has all of the ear-marks of a bacterial product. Its occasional but very dramatic association with rheumatism and endocarditis lent much color to this conception, and in the minds of many, identified it as a sort of cerebral

rheumatism. But now that the rheumatic rope has been unstranded, and we no longer regard rheumatism as an element, but know it to be a clinical compound, the rheumatic theory loses much of its significance, especially in the light of the fact that chorea has a remarkably low mortality, while rheumatism has a higher one; with a trail of incapacitating sequelæ unknown to chorea. Standing in our present state of the progression of knowledge, we cannot but feel that what we know of infections is relatively crude information. We think of simples when we really have knowledge of compounds. Our information regarding the interrelations of multiple infections is infantile, and who can now speak with any certainty regarding the complexity of the relationship of compound infections? There is a likely instance of this in our recent tragedy of the influenza. The early cases were light and trivial, but as the thing rolled on, it gained the accretion of frightful malignancy. Who knows but thus certain mildly pathogenic, or even non-pathogenic bacteria, may not have the power to break down the defensive barriers against more serious bacterial invasions?

Years ago, we reviewed the records of several hundred cases in the Hahnemann Clinics, for the purpose of determining the causal relationships between chorea and rheumatism, and we were surprised at the low percentage of association; and this causal association was further vitiated by the known fact that all of the infections of children are prone to produce rheumatoid phenomena. I remember that our conclusions at that time were, that, in our experience at least, the rheumatism-chorea association could not rise above the status of accidental relationship.

The author, in briefly setting forth the various pathological ideas prevalent concerning this disease, clearly shows that as a matter of fact we know little or nothing concerning the real underlying material conditions; and, since it is a disease of such small mortality, and with therefore limited opportunity to examine its pathography, we after all know very little about it.

Setting aside the dubious material findings, we do know that there is among children a definite neurotic predisposition to the disease, so that it may be difficult to delineate where a sort of psychical fidgets ends and chorea begins. Call it what you may, but there is undoubtedly a neurotic predisposition to the fuller development of the disease, with no sharp line of demarcation.

So with the treatment. The essayist has set forth the current ideas in both of the schools of medicine, and the views

of individual experimenters. Although diversified it is curious that these have all claimed a measure of success, and they collectively leave the poor, over-burdened general practitioner up in the air as to just what to do with his case in hand. In my own cases it has been the practice to first look into and eliminate every source of possible reflex irritation or local infection—and thus teeth, tonsils, adenoids, phimosis and other conditions are first eliminated. A study of our provings have long ago left me in doubt as to whether our remedies were actually homœopathic to the condition. Merely local muscular twitchings produced by drugs are very different from the complicated movements of chorea, and I suspect this difference was overlooked by our early homœopathic observers. Agaricus seems to fit the typical case better than any other remedy, and a trial of this, and its active principle, muscarine nitrate, appear to give the best results. Agaricine is not the derivative of agaricus muscarine, but is from an allied species, and to the present, I am rather content with muscarine nitrate 6x trit., unless there are clear concomitant indications for some other remedy. In the chronic choreas, I hunt with still greater care for reflex deficiencies, and there comes to mind the case of a boy of 14, who for seven years—that is, his whole school period—was incapacitated by continual choreic agitations. In his case the correction of a minor refractive error by Dr. Jessup, stopped the condition, and it has never recurred.

Dr. Wm. Lawrence Hicks, Philadelphia: I am very much interested in the subject presented by Dr. Wilson this evening. Chorea has been quite interesting to me on account of the apparent mystery that seems to surround the cause of the disease. Personally I feel the disease is due to some infection in the blood, just what, I am not prepared to say.

The most important condition next to the cause, in my opinion, is the differential diagnosis between chorea and habit spasms or psychasthenic tics, on account of the difference in the treatment. When I speak of psychasthenic tics I mean the twitching of different parts of the body, not only the face and head. I never have read or been able to set down any symptom or condition that will make this differentiation positive.

The case Dr. Bayley has spoken about that was cured by refraction, I feel sure was one of psychasthenia, as any reflex irritation will cause this disease, and at times the removal of the same will clear up the case.

I have used Fowler's solution many times in chorea, but it has usually failed me. Empirically I prescribe agaricine 2x,

gels., and agaricus. Depending upon the presence or absence of a heart lesion I prescribe rest or activity in the open, with some diatetic suggestions.

Dr. Clarence Bartlett: About 25 years ago I reported a series of 250 cases of chorea studied with reference to the incidence of rheumatism. About 25 per cent. of the cases gave a rheumatic history. The conclusion then reached was very different from those of Germain See, who found a rheumatic incidence in just 50 per cent., and of Steiner, with less than 2 per cent. In the many years that have since intervened, I have had opportunities of observing the subsequent histories of some of the patients, and I have been surprised to learn the relatively large number of instances in which chorea has been followed by serious and ultimately fatal cardiac disease. It is generally believed that the main valvular lesion of chorea is mitral regurgitation; but in the cases in which the heart was permanently damaged, a fair proportion had combined with the regurgitation, a well defined stenosis. Chorea should not then be regarded in the light of a trivial disease.

Dr. Bayley has mentioned the value of suggestion or psychopathic treatment in this disease. With this I heartily agree, and would mention a bad case in which the child was promised a party when she recovered. At once her mind dwelt in the future; she forgot her chorea and misfortunes, and morning, noon and night, thought of "party," and "party" only. Sturges once said of Fowler's solution that it was useless in chorea unless given with confidence. It would appear that the confidence of the physician in his remedies has something to do with the favorable result.

Aside from medicines, absolute rest in bed is of the highest importance. Not only does it have a beneficial influence over the choreic movements, but it lessens the danger of subsequent irreparable damage to the heart. The wholesale recommendation of exercise by the unthinking calls for unqualified condemnation.

Dr. C. S. Raue: Dr. Wilson takes a most commendable attitude in presenting chorea to us as a medical rather than a neurological condition. There was a time when neurologists claimed chorea and contended that it was an idiopathic neurosis. The argument presented was that only a small percentage of cases of chorea give a rheumatic history. Many cases of chorea, however, which do not give a history of rheumatism or which do not have endocarditis at the time they are having their choreic attack develop rheumatism or

endocarditis later. The choreic child must therefore always be considered potentially rheumatic.

It is my impression that chorea is not as common as it used to be and that with a general betterment of social conditions and with closer attention to the prevention of rheumatism and malnutrition there will be a continued falling off in this disease. The examination of school children for ocular defects, diseased tonsils, adenoids and bad teeth is doing much in this direction. Coincidently rheumatism is gradually coming under control and it is to be hoped that this clinical entity will some day become exterminated through the early detection of foci of infection and their prompt removal.

Chorea is to some extent a seasonal disease. The majority of cases are encountered in the spring. This has been my experience in hospital and private practice and coincides with reports from other hospitals in Philadelphia, New York and other large centers. No doubt the fatigue of school life and the lack of sunshine and outdoor life, so essential to the neuropathic and rheumatic child, account for the increase of cases at this time of year. Since anemia and overpressure at school act so prominently in the etiology of chorea we can apply this knowledge to the prophylaxis of the disease.

Dr. Bayley, in his discussion, has called attention to the importance of the underlying neuropathic temperament and diathesis in the etiology of chorea; in fact he has designated the choreic child the "choreic type." We are taking more cognizance of the question of diathesis and type than we formerly did in our bedside work and I consider this a most important subject. Recently Draper, in his excellent monograph on poliomyelitis, has called attention to a special type of child which seems most susceptible to the disease. It would be an interesting digression to discuss clinical types more fully but I have taken up as much time as I feel entitled to and I hope that Dr. Wilson will favor us with some closing remarks to his most interesting and valuable paper.

Dr. Wilson (closing the discussion): The dropping of this paper into this intellectual well before me has, as I had hoped, stirred up many allied conceptions, and finally endocrinology and hypnosis have made their appearance.

When one of the speakers referred to the seasonal incidence of the disease it brought to my mind a statement made by a New York physician, that while the greatest number of cases seen in New York occurred in the fall, attributed to the intellectual strain upon the child in school, this same aggravation came on in the case of the Philadelphia child in the

spring, showing either that Philadelphia caught on more quickly, or that the Quaker brain could not endure as much intellectual stimulation as the Knickerbocker.

In speaking of functional disease it must be remembered that by this expression we denote a disturbance of the bodily health which we can readily appreciate, but at the same time cannot by our present methods discover any changes in the tissues of the body which would account for it. This, however, is no warrant that there are not actual physical changes, which in a later day we may be able to discover, and perhaps more directly attack. For this reason I would direct your attention to the fact that the researches of Hunt give us the first definite data in the pathology of chorea. His experimental work has demonstrated that the cells of the corpus striatum through the extra-pyramidal tracts control co-ordination of the grosser movements. The corpora striata, I may be pardoned for pointing out, are the lenticular nucleus, and the caudate nucleus. The lenticular nucleus is divided into three portions or zones by two laminae of white fibres, and by axones of their own cells on their way to the lenticular loop. The outer zone of the lenticular nucleus is called the putamen, and the inner two from their paler color are called the globus pallidus. The caudate nucleus is pyriform in shape, and is composed of an anterior or expanded portion called the head, which is the external wall, and part of the floor of the anterior cornu, while the tail passes backward along the lateral aspect of the floor of the lateral ventrical; then down and forward into the descending cornu, terminating near its end in the amygdaloid nucleus or tubercle. It is covered by ependymal tissue, upon which rests the cilliated epithelium common to the lining of the ventricles.

According to Hunt the motor cells of the corpus striatum control the so-called extra-pyramidal system of motor fibres, the function of which is to regulate the activities of the automatic and associated movement. While the pyramidal system, *i. e.,* fibres from the cortex, regulates finer discriminative movements, the extra-pyramidal or pallidal system controls the inferior type of movement of a more automatic and involuntary kind. The corpus striatum has no connection with the cortex, or the internal capsule, but it is in close connection with the thalamus, the red nucleus, and the cerebellum, and with the sensory fibre tracts of the cord, while the descending rubo-spinal tract (*i. e.,* a tract originating in the red nucleus, and running down the cord in the crossed pyramidal tracts as far as the sacral cord, and its fibres ending about the cells of the anterior horns) is the remains of an important motor

path in the lower animals. There are two groups of striate cells:

1. Pallidal system originating in the large cells of the globus pallidus, and scattered large cells in the caudate nucleus and putamen. This is a motor projection system.

2. A neo-striatal, or small celled system, located in the caudate nucleus, which is inhibitory, and co-ordinating in function.

Clinical forms:

1. Paralysis agitans: caused by atrophy of the pallidal system; juvenile, ordinary, presenile, and the senile type.

2. Huntington's chorea with degeneration of the small cells of the neo-striatal caudate system, releasing the pallidal mechanism from control, with resulting *choreiform* movements.

3. A combination of these two lesions results in rigidity with chorea, that is, with athetosis.

It should be remembered that almost constant movement is the habit of growing organisms. Every sensory stimulation produces a motor reaction, until intelligent discrimination comes with years. All parts of the nervous system of a child are in a state of over-sensitiveness, as they are recent growths, or only half-finished in some cases, and hence very vulnerable. It should not, then, be a matter of surprise that the general infections which the adult usually successfully resists should overwhelm the child, and that the incidence of an infection should be upon the nervous system, and the more delicate part of that, *i. e.,* the co-ordinating mechanisms of the motor pathways.

I have spoken of the chronic forms as indicating a presenile, or imperfectly developed nervous system, rather than a different disease, or the expression of a different infecting agent. In my experience the former hypothesis seems to be the true one. A case was brought to me who had been under the care of a distinguished neurologist for six or seven years, lived in a house of his own, and had the undivided attention of two nurses, and with little benefit. Investigation revealed the fact that both the mother and father were heavy drinkers, and a little later I was consulted about an older brother, who was a kleptomaniac, and apparently a pervert.

I did not hear in the discussion as much appreciation or condemnation of massage as I had expected. I beg of you to take this into consideration. At Chappaqua, New York City has a convalescent home for children, and many are sent there who can hardly be termed convalescent in any sense.

This is especially true of choreics, and they have them by the score. These children formerly did very poorly so far as rapidity of recovery was concerned, but of late, with most gratifying results, they have been employing massage in addition to their former reliance upon hygiene, and abundant simple food. I think that we should pay much heed to lessons from large aggregations of definite forms of disease. The practice of any one of us may be large in the common acceptation of the word, but when it comes to specific diseases it does not bulk so hugely. The enormous masses of the Great War have demonstrated that the deductions from dozens of cases may not seem so impeccable when compared with the lessons taught by thousands upon thousands of cases of a given malady or traumatism, and this Chappaqua experiment is large enough to command our attention.

SURGICAL EMERGENCIES OF GASTRIC ULCER; LINGUAL GOITRE; DRAINAGE OF THE PLEURAL CAVITY.

BY

D. ROMAN, M.D., PHILADELPHIA,

CLINICAL PROFESSOR OF SURGERY, HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA

(Read before the Homoeopathic Medical Society of the State of Pennsylvania.)

If the clinical picture of gastric ulcer does not suggest emergency in a surgical sense, the clinician and the surgeon are occasionally confronted with experiences which leave a lesson of inestimable value when considered in the concrete limitations of an unusual case but which is lacking in real, practical merit at the bedside, in the ordinary type of cases of ulcer of the stomach.

Emergency or urgent surgery in gastric ulcer can be said to be limited to hemorrhage and perforation, and if we cannot claim that these occur with relative frequency, in my own experience in last month of April, I had one case of urgent gastric hemorrhage in a well known, thoroughly diagnosed and long medically treated case of gastric ulcer.

Two weeks later I operated on a case of perforation of stomach at seat of an ulcer in anterior pyloric antrum. This case had been medically treated, but never diagnosed or even suspected beyond an ordinary functional disturbance.

From these two striking cases, I have met with milder types of hemorrhage and perforation in the course of gastric surgery or in surgery of the upper abdomen, which were less urgent and were lacking in characteristic signs or gross diagnostic indications.

For instance, we meet, with relative frequency, perigastric adhesions at the scar of slowly leaking, perforating ulcer, which means that but for those protective adhesions, gastric perforation, with its urgent clinical phenomena (*pain, shock* and *peritonitis*), would be recognized as a frequent surgical emergency.

Case 1. Profuse, exanguinating gastric hemorrhage from *pyloric ulcer.* Mr. H. C., age 50, Penn. R. R. official, had been for five years under constant medical care for gastric ulcer. A positive and accurate diagnosis of gastric ulcer had been made, and he was considered as a medically manageable case, and was progressing satisfactorily under the expert care of a gastro enterologist when the alarming hemorrhages set in which forced surgical intervention. I operated and found a large pyloric ulcer, encroaching posteriorly from the pyloric cap into the duodenum, with marked infiltration and thickening of the posterior gastric wall and partial occlusion of the pyloric sphincter, necessitating a pylorectomy as the operation of choice, and a posterior gastro jejunostomy.

Notwithstanding that the patient was a poor operative risk from hemorrhage, and the necessity of an extensive surgical procedure, his recovery was uneventful and rapid. He is now enjoying good health.

Case 2. Mr. R. C., age 36, employed in an official capacity at the U. S. Mint. Had marked pyorrhœa and had complained of indigestion from time to time for which he received medical treatment at the hands of his family physician, but had never been examined or suspected beyond the ordinary functional gastric disturbances, and so treated.

On April 19th, after a luncheon of boiled rice, bread and jelly, complained of sharp epigastric pain, from which he suffered without relief from three in the afternoon until about six-thirty. When he returned home, and tried to eat dinner, was able to take a small piece of steak but could not continue eating, owing to the fact that the first mouthful of food that entered the stomach, aggravated the pain which became so intense that he had to be put to bed; became cold and clammy

and was removed to the Garrettson Hospital, and his family physician summoned.

I was called in consultation at eleven o'clock that evening, that is, eight hours after the beginning of the epigastric pain, and I found general muscular rigidity and tenderness of the abdominal wall, without any special localization or acute tenderness, but the patient's general condition was that of profound shock, plus the characteristic hippocratic expression of abdominal inflammation. Operation was performed at once, with the diagnostic conviction that this was not an appendiceal tragedy. The abdomen was entered over the right semilunar line, extending to the epigastric area, thus exposing the pyloroduodenal and gall bladder regions. We at once discovered a large perforation in the anterior wall of the pylorus in the center of a cup-shaped ulcer. Operative intervention, in this case, was most fortunate and successful, as his recovery was quick and complete.

The lessons may be drawn as follows: In the first case of hemorrhage from a clinically recognized ulcer, would seem to be that in the midst of improvement during medical treatment we are unable to satisfy ourselves by the ordinary means of detection, that the ulcer depth is in keeping with the progress of the patient; in other words, an improving patient, under medical treatment, may be approaching urgent surgery and death, and the question naturally arises, whether or not prolonged treatment, that is, dietetic and medicinal, is sufficient to satisfy ourselves that we are doing all that should be done for such cases. Or, should we look more closely into the actual physical indications of ulcer healing, if such is practicable, or shall we decide upon operative intervention in a greater majority of cases than we have up to the present time?

In the second case of perforation, I think the lesson is one which is clearer than in Case 1. That is to say, ordinary indigestion, for which patients casually consult their family physicians, demands more careful, painstaking and searching examination on the part of their medical advisors. There is no doubt that Case 2, of "perforated gastric ulcer," had a long standing and clear history of his ailment, but he did not consult his doctor, or any other physician, satisfying himself with home remedies, although he remotely had been treated

for gastric symptoms by another physician who did not suspect any serious disturbance.

We have met with perforative gastric and duodenal ulcers in cases who seemed to have had no previous treatment, or who had only been superficially looked into by their attending physicians and, whilst preventive medicine will not succeed in anticipating such emergencies, yet, the number of cases reaching the operating table might be greatly reduced by more careful inquiry into the commoner gastric complaints.

The next number in my surgical vaudeville, is one of unusual interest, as well as a rare lesion, in fact, one of the rarest of its type. I refer to a case of lingual goitre, or enlargement of the thyroid body at the seat of embryonic development of that gland. As you all know, the thyroid gland develops at the foramen cecum in the base of the tongue, and that from there, as a point of origin, it travels down to its permanent position in front of the trachea. In this case we have the following history:

An Italian woman married at twenty, has had six pregnancies, and about the sixth month of each pregnancy would complain of hemorrhage, swelling, difficulty in swallowing and shortness of breath, with a visible enlargement of the base of the tongue, in front of the epiglottis. The bleeding recurred at intervals of two or three weeks, and with more or less severity. All symptoms would disappear, excepting the enlargement of the tongue, after each childbirth; only to recur on the advent of another pregnancy, and nearly always about the beginning of the sixth month. Two years ago she was taken to the Medico-Chirurgical Hospital and there the enlargement at the base of the tongue was treated by frequent cauterization, and discharged unimproved. When seen by me early last April, with Dr. I. G. Shallcross, of Philadelphia, a bilobular tumor over the base of the tongue, close to the epiglottis, could be seen, and patient appeared anemic and distressed by choking and constant urging at deglutition and salivation.

Observation of this tumor showed it to involve the base of the tongue, and the proposed operation for the removal of the same naturally suggested malignancy and that the extirpation of the tongue would be the only radical method of treatment. Preparing for this radical procedure, a preliminary tracheotomy was performed on April 7th last (1918),

and, a week later, the base of the tongue was exposed and the tumor removed, without carrying off the tongue, by the following procedure:

A vertical incision in the median line of the lower lip, down under the mandible, to hyoid bone. A central incisor tooth extracted, jaw divided in the median line by means of a chain saw, and rami of jaw separated, allowing the tongue to be drawn forward, anterior faucial pillars divided transversely, thus permitting freer exposure of the glosso-epiglotteal region. We were now able to enucleate the bilobular growth at the base of the tongue without removal of the latter, and not until this moment were we impressed with the fact that we were dealing with a benign thyroid enlargement, rather than with a malignant growth of the tongue. The base of the tongue was now rebuilt from the lateral columns, the caucial slit repaired, the rami of the jaw wired in accurate opposition, and lip and neck wounds closed by a subcuticular stitch. The patient was etherized through the tracheotomy fistula in a very successful way.

The patient's recovery and present condition of health are ideal, and there are no indications whatsoever of hypothyroidism as might be expected, had we carried off all thyroid structure ectopically arrested at the base of the tongue. Histological sections of the growth removed showed it to be a typical colloid goitre.

Passing now to the subject of drainage of the pleural cavity in pyothorax, permit me to report six cases during April of this year (1918), in which resection of two ribs in the usual manner for drainage of the pleural sac has been followed by packing of the pleural cavity with iodoform gauze, instead of draining with rubber tubing as has been in vogue for many years. This packing-technique was suggested to me by Dr. William B. Van Lennep, and it undoubtedly appeals as a more logical method of treating the pleural sac, when compared with tube drainage.

To treat the pleural sac, as any other suppurating cavity, is the objective point in favor of packing, and the expansion of the lung occurs in a more gradual and less distressing way than in tube drainage because of the supporting pack. The masses of lymph and thickening of the pleural sac break down more rapidly under gauze drain than when we allow reaccumulation of serum, pus and lymph flakes in an empty cavity.

Aside from the mechanical comfort, support and liquifaction of the inflammatory thickening, this method of packing insures against reinfection from without and hastens the healing process very materially. In my six cases during last April, healing was completed in from three to six weeks after the operation, when, by the tube drainage method, it varies from two to three months. There is comfort and great economy in dressing, as well as greater cleanliness in the care of cases. All these six patients showed a hemolytic streptococcus type of pleuretic infection, an observation which has been made in Army cantonments this last winter where many cases of pleurisy followed upon wide-spread epidemic of measles.

DISCUSSION.

Dr. Frederic S. Morris, Pittsburgh: The first act in Dr. Roman's vaudeville is particularly interesting, and that is, the accidents in gastric and duodenal ulcer. My experience in perforation and acute perforation has covered now some twelve to fifteen cases. In but two of these that I recall at present have we failed to save the patient. In not one of the cases was ulcer diagnosed before the time of operation. The two cases that were lost were diagnosed as perforations; and, strange to say, they occurred in the hands of the same doctor. A thing that has led us to the diagnosis of perforation is the thing that we are interested most in for the saving of the patient, the sudden onset of violent, acute epigastric pain, which may come on at any time, by the way—after a meal, at a meal, or just before taking a little food. The time does not make so much difference in the onset of this particular pain; but it is violent and produces rapid collapse; and when you examine the patient, the abdomen is as rigid as that table top. That board-like rigidity of the whole abdomen, we have not seen fail to be present once in any of the series. I do not believe that there is a lesion of the abdomen producing such intense rigidity as this. Generally we do not see the patient until two or three hours after the onset of the attack. It is thought to be acute indigestion, and all sorts of remedies are given; and by the time the doctor is called, the pain is so intense that the only thing you think of giving is morphia. A quarter of a grain does not relieve the pain. Another eighth does not. The rigidity becomes more intense. In these cases, we always found perforation; and the perforation has been in the region of the pylorus or in the duodenum. We generally get a little bit of history of gastric

symptoms to point to ulcer; but very often, not. The patients tell you that they have attacks of indigestion sometimes; but usually, at the time of the attack, they are so distressed with pain that it is almost impossible to get a clear history of ulcer.

Do not forget the rigidity. It is as clean-cut as possible. Of the two cases that I spoke of that were lost, one had been in progress for over forty-eight hours. The abdomen was examined, and was found to be distended and quite rigid. We were able to make out an extensive tympany with a little brassy sound to it. We were at a loss to decide what we had to deal with; but the early flaccid abdomen suggested perforation, and this we found. On opening the abdomen, there was a rush of air, as if one had opened the bowel. The stomach was partially collapsed. The omentum and colon were plastered together, as a back wall; and through the abdominal wall to the front, the ulcer had eaten, and the cavity was filled with air.

The second fatal case was of similar type, of forty-eight hours' standing, with a profuse abscess extending down to the vaginal gutter to the abdominal cavity.

What I want to make clear is the recognition of perforation always with this board-like rigidity.

Of hemorrhages, we have had but two or three cases; and all were ulcers in the pylorus. All were operated on.

Of gastric ulcer, we had one case that was unusual, in a child of six, with perforation of the posterior wall into the cardiac antrum. It was not recognized, and was treated as a case of acute indigestion. The thing is to recognize the perforation and get to it quickly. Hours and minutes make a lot of difference in saving the patient.

Dr. Desiderio Roman, Philadelphia (closing the discussion): There is hardly anything that remains to be said. Opinion is again coming back to the maxim of more careful examinations. This opens up a vast subject, and that is that not every man can make these examinations. The examination should be made thoroughly, in order to do full justice to the patient. An x-ray examination should be made by an x-ray expert; a gastric examination, by a pathologist, etc.; and the patient may, for financial reasons, object to being shifted from specialist to specialist, and be tired of paying bills and seeing new faces. Nevertheless, in justice to the patient, the work should be done. The patients coming in complaining of a little indigestion, year in and year out, ought to be interrogated as possible cases of peptic ulcer. If there is one, a radiogram will bring out its appearance in the ab-

sence of physical signs. The occult-blood and test-meal examinations cast enough light to suggest keeping the patients under close observation. To suggest operation to a patient who is getting along reasonably well under medication is a hardship. We shall never find that patients will submit to operation in cold blood. My patient was a busy man, and never would have submitted to operation until he almost bled to death. It does not relieve us, then, of the difficulties of making these examinations and the necessity of sending the patients to the specialist, nor of the necessity not to let gastric symptoms go on with the ordinary prescription for their relief. Just as we learned, in the last twenty years, that with every belly-ache the first thing that should come to our minds is appendicitis, so that every practitioner is now a specialist in appendicitis. The general practitioner will often insist on operation when the surgeon is conservative. Why? Because the bitter lessons of the last few years have taught him the bad results of conservatism. The cases come to the surgeon diagnosed by the family physician; and, in fact, by the laity. People, the moment they have pain in that region, send for the doctor and say, "I think I have appendicitis, and I want to be operated on." Our days of convincing patients that an operation for appendicitis is urgent are past. Now you are forced to operate, if you are in the least hesitating. Patients say, "Doctor, don't let me go too long; I do not want to be operated on and have to be drained."

PREPARATION AND CARE OF HOMEOPATHIC REMEDIES.

BY

WILLIAM RAYMER, M.D., BEAVER FALLS.

(Read before the Homoeopathic Medical Society of the State of Pennsylvania.)

In the preparation and care of homeopathic remedies, it is absolutely necessary that we have cleanliness and a thorough understanding of botany, because there are many species of certain kinds of plants, and a man who is not thoroughly conversant with botany is liable to get a wrong plant and prepare a tincture from it. Not only in utensils that are used, but also in the medium (alcohol, distilled water, pellets, etc.), great care must be taken.

If you expect to get good results from your drug, you

must remember the difference between homœopathic alcohol and absolute alcohol. What we use is called 87 per cent. alcohol, while absolute alcohol theoretically should be 100 per cent. It is, however, almost impossible to get 100 per cent. proof alcohol, because alcohol absorbs water; and when you come to test it, the proof will be about 95 per cent. Ninety-five per cent. alcohol is made into a homœopathic alcohol, or 87 per cent. proof alcohol, by adding seven parts of alcohol to one part of distilled water. Dilute alcohol is made by adding seven parts of 87 per cent. alcohol to three parts of distilled water; and there is the foundation for nearly all the future action of the drug that you are employing. If you do not have the dilute alcohol correct, you are making a mistake in the very foundation that you are going to build on; because, if your alcohol is not absolutely pure, redistilled, and if your aqua is old, you will not, when you mix them together, get the result that you expect from your remedy. The foundation that you start with is already weak.

In making the distilled water and your dilute alcohol, be sure to have them pure. This is not the dilute alcohol of our old school practice; because the old school physicians use what they call dilute alcohol, consisting of forty-seven parts of water to fifty-three parts of alcohol. That would not work in our school, because the tinctures are made in certain ways, and it is absolutely necessary to get started right. I know that some homœopathists are failing in their practice today because they do not know that it is necessary to make dilute alcohol in a proper manner.

Distilled water should be kept in glass bottles, and made only in small quantity, as it deteriorates quickly. Homœopathic mother tinctures are prepared under certain rules, and the strength of a mother tincture is indicated by the proportion of medicinal substance that it contains. Homœopathic tinctures are not uniform. Their strength varies, being influenced by the nature of the drug. The actual amount of the drug in a phosphorus mother tincture, for instance, is one-tenth of one per cent.; but the mother tincture of an acid generally means the first decimal dilution. That is, one part of the acid to nine parts of water. You cannot get phosphorus below the third decimal, and it is soluble only to the amount of 1-1000 parts of alcohol. There is a stronger preparation of phosphorus made in ether, but a homœopathist

does not want to use it; because it is not made under the proper law. When you go to a homœopathic pharmacy and buy a mother tincture of phosphorus, and a third dilution of it, you buy the same thing; although they do not always tell you so. The third will, in time, change to phosphoric acid. In fact, all preparations of phosphorus are unstable.

Please note that you should prepare your own potencies, or get them from a reliable homœopathic pharmacy of established reputation; as there is no test for determining the genuineness of a homœopathic preparation. When offered anything in a homœopathic line, you want it absolutely pure, if you are a good homœopathist.

The question has been asked, "What is the difference between a homœopathic mother tincture and an allopathic tincture?" Most of the tinctures found in drug stores are made from dried plants, often with the introduction of foreign substances. For example, our tincture of sanguinaria canadensis is made from the fresh plant alone. If you ever attempt to make a preparation of it, you had better use 95 per cent. alcohol; because it seems to act better on the root than the 87 per cent. It will not throw down so much as the 87 per cent. I am talking to you as an altruist, and trying to give you something that will be of benefit to you in the future. The ordinary tincture of sanguinaria is made according to the formula of the U. S. P., and contains considerable acetic acid. You find that in nearly all the drug store tinctures that you get. You do not want anything of that kind, if you are going to make a dilution for use in your practice. Our tincture of aloes is pure aloes, while that of the old school contains twice as much licorice root as it does aloes. Our tinctures of opium and rheum are pure; the old school tincture of opium contains phosphate of lime, and that of rheum contains cardamon. These are the reasons why you should not use any old school tincture in homœopathy.

Not long since, I was called in consultation on a case of typhoid fever. The patient was *in extremis*. It seemed as if he could not possibly live. I said to the doctor: "This is a baptisia case." He replied: "I am giving it." I said: "Let me see your baptisia." He showed it to me, and I said: "That is no good; let us go to my office, and I will give you some." There was no more strength in what he had than in so much colored water. It was not a homœopathic prepara-

tion and, consequently, was not doing the work. I gave him some of the tincture that I had prepared myself. He gave it to the patient, and there was a change within a few hours, and the patient got well.

Now as to fluid extracts: A great many physicians use the fluid extract in place of the homœopathic tincture, because it is cheaper and they think that it is as good. Is that true? I do not want to run anything down or say anything detrimental to any manufacturer of drugs, but those people who manufacture a great quantity of fluid extracts have various men gathering the plants and sending them in. The stuff is gathered today, and perhaps laid by for several days before being packed. It is then packed in tight boxes and shipped all over the United States. When it reaches the manufacturing firm, they may not be ready to use it; and it is put in a damp place or a close room, and fermentation occurs. There is then a destruction of the medicinal qualities of the drug. If you mow grass and put it in piles, and leave it for twenty-four hours, you find that there has been a change. There is heat, and a change in color and smell. A beast will not eat it; and if it does, it usually kills him. So you cannot expect to get a fluid extract prepared in large houses and have a remedy that will answer for homœopathy. It is a fact. I have watched these people gathering, and know how they put the plants away. They do not use care.

Do homœopathic houses use care? I cannot answer; but I believe that an honest homœopathic pharmacist would not allow that to occur, because he knows that he would be sending a useless remedy to someone who trusted him. You have the life of the patient under your care; and if you have not a properly prepared remedy, the death of the patient comes back to the man who first made the tincture. These are serious problems, which the pharmacist should hold before him all the time.

I am emphatic in regard to these matters, because I am a homœopathist; and the more I study homœopathic drugs, the more firmly do I believe in them. We are getting away too much from the fundamental principles laid down in our books.

I have brought with me to show you four or five remedies, the products of an amateur. They are rhus toxicodendron, baptisia, cimicifuga, podophyllum and collinsonia. We

have nine classes in our school, in the American pharmacopeia. I am talking for American drugs, because we want to eliminate the Hun entirely from our medicine in the future; and I believe that God has provided in nature everything necessary for the cure of human ills. If that be true, then I will say to you that within a short radius of the city of Pittsburgh there are from one hundred to two hundred and fifty remedies that can be gathered and prepared by an amateur, as well as by any scientific pharmacist. This is a hobby of mine. I wish I had the gift of the gab, and could bring it to you as I should like to do.

I am only going to touch on three classes of remedies. The fourth class is a tenth power tincture and, consequently, is made from dried substances; and you would not be as much interested in these as in the ones that you might be able to take up yourselves.

Class 1 is what we call a half-power tincture. Among those in this class is belladonna. Belladonna is a peculiar remedy. You can make a tincture from the root or from the plant, and have a half-power tincture; because the plant is succulent enough. But you cannot do that with aconitum, plant or root. One is half-power, and the other a sixth-power tincture. For the half-power tincture, we take the plant or root, chop it up fine, pound it to a pulp, put it in new linen and express the juice, and mingle it with equal parts by weight of 87 per cent. alcohol. You then place it in a dark, cool place and let it remain for eight days. At the end of that time, we strain, filter, and bottle it; and we have a mother tincture of the first class.

In making the dilutions, we make them with dilute alcohol. It must be absolutely pure. We take two parts of the tincture to eight parts of dilute alcohol; and that gives the first decimal potency. After that, we make the potencies according to the scale.

I am not going to touch on the centesimal, because it is on the same ratio as the decimal—that is, two parts of tincture to 98 parts dilute alcohol.

Tinctures of the second class are of same strength as those of the first class. The only difference in preparation is that the plant or parts thereof are not so succulent, hence three parts of plant to two parts of alcohol are used.

Third class tinctures are made by taking one part of plant

or parts thereof, chopping and pounding to a fine pulp, mix with two parts of alcohol, let stand for eight days in dark, cool place. Decant, strain, and filter. This gives you a sixth-power tincture. Dilutions are made by taking six parts of tincture to four parts of dilute alcohol.

All homœopathic preparations should be kept in a dark, cool place, the corks and labels examined frequently. If this is done, your preparation will keep for years and you will not have to guess as to contents of bottle from loss of label.

THE MIDWIFERY SITUATION IN PITTSBURGH.

BY

H. J. BENZ, M.D.

Superintendent of Bureau of Child Welfare, Department of Public Health of Pittsburgh, Pa.

In 1913 there was passed by the Legislature of the State of Pennsylvania an act which compelled a midwife to obtain a license to do work. This license must be renewed yearly. When the situation was put up to Pittsburgh, it was suggested by those in charge of health work that it would be advisable that an investigation of the case be undertaken by the nurses in the Department of Health, Bureau of Child Welfare. There were ten nurses, later increased to fifteen, and now to eighteen. They make an investigation of every birth reported by a midwife within the confines of the city. The midwife is compelled to report her cases to the Bureau within forty-eight hours; and, in cases of emergency, to call a physician. If she could not do this, she must notify the Bureau, so that they might take action.

I wish now to bring out the attitude held by many physicians towards midwives. They refuse to listen to the call of a midwife, very often, because she has been on the case. Perhaps, when I get through with these figures, you may not censure the midwife so much; because she is earning her living. She is the remnant of an old condition. In licensing a midwife, the State is not giving countenance to the midwife, but is trying to eliminate gradually a condition that is here and must be controlled. There have been 15,402 births (approximately 30 per cent. of city births) within the city

during the last three and one-half years. Of these, 2,426 were in primiparas. The mortality for the mothers was 18. I do not think that you find much difference when doctors are employed. The mortality of infants was 461, of which 247 were before term. There were 34 infections of the breast and nipple. Of ophthalmia neonatorum, which causes 95 per cent. of all cases of blindness in children under four years of age, there were 56 cases. At the present time, every case suspected of being in this condition has an examination made of the pus at the Department of Health. The nurse takes a smear and brings it in immediately, and the report is given the same day. Of conjunctivitis, not ophthalmia neonatorum, there were 103 cases; complications of the navel, 78. In this number of births, there were 79 sets of twins and one set of triplets. In one case the baby was delivered by the husband; three cases by neighbors; and in eight, by themselves. The different forms of dystocia were 371. There were 315 cases in which the physician was called by the midwife.

In looking over this list and giving it somewhat of a study it has been the impression of those who have been doing this that this work is fairly good. We have seen the amount of ophthalmia among the children markedly decreasing. There has not been a blind eye among these cases within four years. When you consider that the midwife works among the laboring foreign population, with the conditions of the worst, I think the results are good.

The midwife works under certain rules. I will grant you that all of them do not obey all the rules exactly as given; but neither do all doctors. If, however, we find that they are disobeying the rules, the offending midwife is suspended, or her license is taken away. We have suspended midwives and taken away their licenses, and sued women for practicing without a license. In the sections in which they practice, they have some bad household ideas. For instance, one idea is that in infections of the eyes, the use of breast milk does good. We have made it a rule that silver nitrate must be used in every case, immediately after the child is delivered, irrespective of the condition that is found. With few exceptions, every case has silver nitrate instilled immediately after birth; and that silver nitrate is supplied by the Department of Health. That is one reason that the neonatorum type of ophthalmia is so low. We had two cases in twins, in which

it was due to the condition of the mother. The midwife was at first blamed, but it was found that the mother had had pneumonia right before her delivery: the pus showed pneumococci.

I wish to say, in connection with these investigations, that the reason this was done, and advocated at this time, by nurses, is because it gave the entry into the houses of these people to the nurses; and they could give a lot of prenatal and postnatal instruction, which, otherwise, they could not have an opportunity to give. Many of these people, after a year or two of the visits of a nurse, cease the use of a midwife and get a doctor, but they sometimes went back to the midwife, when they found that the attention received from the doctor was even poorer than that which they had received from the midwife. The midwife is a remnant from Europe that has been handed down because they had very few doctors in some districts. She takes care of the family, washes the mother and baby, and cooks the meals; and many doctors barely touch the child when delivered, and leave everything to attendants.

That is about all I can say on the proposition, except to ask you, if it is your good luck or ill luck to be asked to help out with a case attended by a midwife, that you overlook the fact that a midwife has been attending the case. I have seen doctors refuse to attend a case in these circumstances. Very often it is a question of money. You should act in a broad, humanitarian way. If such work is not in your line, notify someone else or the Health Department, who will try to get attention for the case. I thank you. (Applause.)

DISCUSSION ON DR. BENZ'S PAPER.

Dr. I. D. Metzger, Pittsburgh: I appreciate very much what Dr. Benz has given us with regard to the midwife question. I should like to state, in connection with it, a few things concerning the question in other parts of the State. The Bureau of Medical Education and Licensure has charge of the midwife proposition. In Philadelphia and Pittsburgh, there is work carried on in this line. In Philadelphia, there are three salaried physicians who do nothing but this work. In Pittsburgh, Dr. Benz is taking charge of this; and, with his assistants, he oversees the work. In other parts of this State, outside of these two cities, the inspection of midwives

is under the control of the general Health Inspector. This Bureau has tried to work with the Bureau of Health, and have the work under the control of the same men. In no part of Pennsylvania is a woman permitted to act as a midwife without a certificate. This costs ten dollars for the original certificate. It is only granted after the Midwife Inspector of the County has assured himself that the woman is capable of doing this kind of work; that is, that she understands asepsis, the use of silver nitrate, and general care in midwifery. She must be able to make out the vital statistics records in English, and must understand, in a general way, the laws pertaining to this. The inspector examines a woman who desires a certificate; and after he recommends to the Bureau that a certain one is qualified, the Bureau authorizes her to do the work. But this certificate must be renewed every year. This gives the Bureau the advantage of stopping the work at any time. The licenses can also be revoked. The local inspector may appeal to the Bureau; and if the case merits it, the license will be revoked. If you know of any woman, especially in the rural districts, who is doing this kind of work, you can mark it down that she is doing it outside the law if she does not possess this certificate. If you know of such a case, you should report it to the Bureau of Medical Education and Licensure at Harrisburg. I have no doubt that there are many such cases coming into contact with you, and it is your duty to report them. If the midwife violates the rules in any way, this should be reported immediately; and peremptory action will be taken regarding the midwife's certificate. I wish we could understand this clearly and co-operate with the Bureau. The midwife is a necessary nuisance, as you may say. We hope that the time will come when all these cases will go to the hospital. The hospitals have been required to take in all cases that apply for midwife work. If they do not they jeopardize their appropriation. If we can send these cases to hospitals, we can do away with midwives entirely. If you co-operate, it will aid the Bureau and serve the State in this line of work.

Dr. George B. Moreland, Pittsburgh: I have not been engaged for some time in work that has brought me in contact with people of this sort; but I can remember that in my earlier life, when I practiced within four or five squares of Dr. Benz's official office, I came in contact with a number of these midwives and had the opportunity of observing them when under no control whatever. I had the opportunity of being called by them in consultation, and I went; and I want

just simply to speak along the line of Dr. Benz's remarks and say that anyone who is called in should forget about his being a physician and the other party's not being, and consider the prospective mother and the child. We should consider the individual who is the one that we ought to be looking after and the one that deserves our attention, no matter what her idea might have been in getting someone else to look after her. Perhaps it was the custom of her country.

Dr. Edwin L. Nesbit, Greensburg: We should endeavor to look the facts in the face. The practical facts that we are confronted with in some outlying sections are that we not only have midwives, but we also undoubtedly have women who are not midwives—much less licensed ones. Our responsibility is not primarily to any preconceived notion of our dignity as a profession; and so, in meeting these cases, I am pleased to be able to say that I am also one who does not hesitate to consult with a midwife, provided that the life of an individual is at stake. I am from a large industrial community, where there are many people of all kinds, of situations, traditions, and prejudices; and where languages of every sort are spoken, and English barely understood. The way in which I have attempted to solve this problem is by taking into my service a visiting nurse. She is not a trained nurse. Neither is she a midwife; but of all the women nursing in the community with whom I have been brought into contact, she is the one who has had the best training and practical experience. She has the qualification of hard, common sense; and this led me to take her into my service, as an expedient to meet exactly this difficulty. In the cases of patients who have engaged my services, she makes periodic visits of a prenatal character, for the purpose not only of instructing the prospective mother, but also of seeing to it that preparations are made; so that when the time comes for confinement, we may at least have a measure of cleanliness in which to work. Likewise, at the time of delivery, she serves as my assistant; and at the conclusion of the case, when the patient has been made comfortable, she, with myself, leaves the case and turns it over to the woman selected by the family as a nurse. Her duties do not end at that point, however; for following my visits, and at intervals between my visits, she visits the patient and gives me a report, not only as to the conditions there, but as to whether or not my instructions are being carried out. In that sense, she serves as a supervisor for the untrained women, who very often, I believe, through their ignorance and their ideas of nursing, are re-

sponsible for many of those unfavorable after effects of a normal confinement.

Dr. Benz's statistics are very interesting; and, at the same time, they show us that, as a profession, we need not be overhaughty in our attitude towards the midwife: because she gets results fairly comparable with our own. We must, at this time particularly, when there is a shortage of doctors, provide for some practical expedients such as that which I have mentioned. This will give us a measure of good results and save many children that we have heretofore lost. I have been astounded, when asking a woman how many pregnancies she has had, to learn that out of five, six, eight or ten, there have been two or three miscarriages, and perhaps three to five living children remaining. Certainly, we, as a profession, should consider this not as a matter of any fancy professional dignity, but from the standpoint of the welfare of the State and of the individual, who, after all, is the essential unit of the State.

Mr. John Ihlder, Philadelphia: As a layman, I rather hesitate to go into this discussion; but it is a subject in which the layman has a direct interest, and in which we are trying to do something in Philadelphia, working with the profession. Dr. Benz told us of one service that the midwife renders which the doctor does not. The midwife does a little more than merely deliver the patient. She washes the baby and the mother, and starts them off right. You must meet the situation by substituting for these some things that the doctor does not do. In Philadelphia, we are going to have women to carry on the work afterwards.

One of the speakers referred to the desirability of having births take place in hospitals. It may be that, as a theoretical proposition, this would be better; but as a practical proposition, it is not possible. We cannot provide hospital space enough, so we must try to make the home a safe place in which the birth can take place.

Dr. Benz (closing): A week ago, an Italian lady applied for a license as a midwife. She had had three years' experience in the schools at Naples. I examined her. She was not very proficient in English. I recommended that she be given a license. Dr. Baldy asked me why I recommended her, when previously I had refused four or five applicants. I stated that since that time, in that same district, almost one out of two of the doctors there had left. Here is a class of people of Italian type who have only a few men on whom they can call for medical aid: because the rest cannot talk

to them. If I do not give them a midwife, I shall have volunteers delivering them. The best thing to do is to give them a midwife.

As to the duty of the doctor in the case, there is one thought that I wish to put in your minds. Every doctor is, in himself, a public health official; and if he thinks of his obligation to the State, because of his superior knowledge of certain things, more than he does of the extrinsic things that come into his mind, and keeps before him the general good that he can do, he will help the Health Department of his locality.

MINOR OPERATIONS THAT GENERAL PRACTITIONERS SHOULD KNOW HOW TO DO.

BY

J. M. HEIMBACH, M.D., KANE, PA.

Read before the Homœopathic Medical Society of the State of Pennsylvania.

An axiom on which all of us can agree is that perfect health is the result of perfect functioning of all the cell groups in our bodies and is dependent upon the unobstructive transmission of vital impulses from the sympathetic nerve ganglia to the cells through the medium of the efferent and afferent nerves. This dynamic force necessarily originates in the Sympathetic System and even is back of the development of the Cerebro-spinal System which enables us to will and do and provide for our very existence.

We have ample proof that the sympathetic system causes our organs to function harmoniously and directs all our bodily growth. Any interference with this nerve force spells disaster to our well being.

Anatomists tell us that the sympathetic nerves of the chest and abdomen are fully developed while the brain is yet a pulpy mass. This would hardly be the case if the necessity of nature did not require it to rule the organs they supplied. They entirely control the viscera at birth as perfectly as in the adult while the brain and mind are very slowly perfected and should keep on developing until we are about to die, and yet how imperfect we all are in our mental growth. I have seen a fully developed child born in every respect except no cranium or brain whatsoever present, which in itself would prove

the priority claim of the sympathetic nervous system and the most essential as to our development and physical and mental health. Our cerebro-spinal system, after all, is only the connecting link between body and soul and makes the body dance to what music it chooses. When health is impaired faulty cerebro-spinal activity is likewise apt to be impaired from a minor degree to paralysis or hyperactivity to illusions, insanity, or irresponsibility which may be reflex or pathological. We must agree that health is essential for the harmonious functioning of all the specialized cell groups or organs in our bodies.

Let us just recall a mental picture of the anatomy of our sympathetic nervous system, the double chain of ganglia known as the lateral system along both sides of the spinal column, and how the cardiac nerves go to the cardiac plexus, the splanchnic nerves to the abdominal brain or solar plexus; the sacral nerves to the hypogastric plexus and how these collateral plexuses, cardiac and solar plexuses are connected by the pneumogastric and lateral chain and how the solar and hypogastric are connected by the aortic plexus and the lateral chain, and how the lower orifices of the body are supplied by the pelvic and sacral plexuses, we can get some idea how irritations in these parts may disturb the harmonious functioning between the lateral and the collateral systems, the former supplying the circular muscular fibres of all tubes and the latter supplying the longitudinal fibres. This is, indeed, a sensitive tuned arrangement where the sympathetic ganglia are the many listening outposts that never weary day or night and only report to the central nervous system when in absolute distress. Unless we do not thoroughly understand the language they convey and interpret aright, we only waste our skill on suffering humanity and neglect an art that is becoming more and more obsolete while the larger portion of the medical profession is standardizing methods of treatment of different diseases when they should consider the patient as an individual entity. The big factor is the personal equation regardless of extraneous hindrances. There is ample provision in our human economy if not handicapped by too much or too little functioning of our sympathetic nervous system to keep us in good health. The best of health is dependent upon the amount of reserve force we have stored up and how easily this force is generated and charging our batteries. The

more flexibility we have in this generating plant and storage system the better we can withstand the shocks and excess demands on the different cell groups.

You cannot ground an electric battery and expect to retain the charge; nor can you have nerve waste going on in any part of your body and retain the full force of your nerve power. If it would not be on account of the compensatory capacity of the different organs and thus establishing an equilibrium in a large measure we would, indeed, have a hard time of it.

I will call your attention especially to three localities that all of us should be thoroughly acquainted with as to the normal and abnormal conditions of those parts because they are probably more at fault than all the rest that might be considered if time would permit. I want to call your attention to the last inch of the rectum or anal canal, the prepuce of the male and the hood of the clitoris in the female. These parts all contain transitional epithelial tissue, skin histology to mucous histology and nature is not always thorough in its work and leaves it to us to correct the mistakes just as much as the oculist corrects the refraction of the eye, and the ear, nose, and throat specialist looks after the upper orifices of the body. We are too prone to shun the other end although our very creation depends on them.

If we look it squarely in the face, what can not a tight, adherent foreskin do to disturb the rhythm of our digestive function, yea, our mental as well? Likewise an adherent hood of the clitoris, as well as any irritation in the anal canal. There is not an organ in the body that can not be disturbed reflexly from these parts. Is it not a fact that you can make a direct appeal to the respiratory center by thoroughly dilating the internal sphincter of the rectum, although your patient is under deep narcosis? Who of you has not saved a patient's life when they took the anaesthetic poorly, by this operation? I know the knowledge of that fact saved my own son's life and several other patients besides. You can often get the same reflex from the prepuce and hood by pinching it and is a pretty sure indication that surgery constructive to the sympathetic system should be applied.

When I first started to practice medicine mothers diagnosed worms in children as the cause for a lot of conditions such as restlessness, picking at the nose, poor or variable ap-

petites, screaming out in their sleep, etc.; later they learned that adenoids could produce the same symptoms; but did you ever look and examine the three parts above mentioned for the cause of the same symptoms and a good many more besides? If not, for God's sake do so and if there is any trouble, correct it so we can more readily build up a race that is more steadfast physically, mentally, morally, and religiously.

I could give you records of cases that would simply surprise those of you who are not acquainted with this knowledge and some experience in clearing up some of those cases who have been going the rounds of the doctors and were only existing instead of living, you would take a fresh interest in the practice of your profession.

I will just report three cases taken somewhat according to their ages rather than for any other reasons, and were not any more complicated than the three localities mentioned in this paper:

Case 1. A child four months old, who never had a happy day since he was born, was brought to me a year ago. I did not officiate at his birth, but the mother informed me she had had lots of nurses for him and of feeling good herself. The physician in charge had her wean the child on account of colic, vomiting and abnormal stools. Different kinds of artificial foods were tried, all with the same results—that the child kept on crying and disturbing the peace of the home. I myself recommended still another food, with the same result. She, however, gave me a second chance, when I made an examination and found a long, tight, adherent prepuce that could not be retracted without slitting it on the dorsum. I told the mother that circumcision would be necessary and would cure her child. This was done immediately; for the mother was anxious to have something done. She had not had a good night's rest since the baby was born. But the end of the same week he could eat and sleep like a normal child.

Case 2. June 11, 1918, a girl 10 years of age was brought from a neighboring town, who was pale, anaemic, intensely nervous, a restless sleeper, and had a very poor appetite. She had a temperature of 102. The mother told me that she got these fever spells every week or two, while the other symptoms were practically continuous. On account of the father's work they moved about a good deal and no tell-

ing how many physicians had been consulted but never any permanent results came from their efforts. I at once asked for the privilege of examining her and found a very long, adherent hood and the clitoris not even visible. I pointed this out to the mother. I did not make any attempt to examine the rectum at the time, because the child was so nervous, but explained to the mother that in those conditions there was almost invariably rectal trouble and I could easily attend to it when she was under the anaesthetic. I operated the next day. I removed a V-shaped piece from the hood and placed three stitches. I then explored the rectum and found one small hemorrhoid, a few pockets and one papilla, which were removed and the sphincter completely dilated. I kept her at the hospital two days. She weighed 50 pounds when she went to the hospital and 16 days after the operation I weighed her in my office and she tipped the scales at 65 pounds and some time later the father told me she had gained five pounds more. She was feeling fine in every way in just a few days after the operation. She was "as hungry as a bear and slept like a log," the mother put it. I could see for myself for the eating and took her word for the latter.

Case 3. An Austrian woodsman 50 years of age came to me just about the same time, who had a very poor appetite, a pulsating abdominal aorta that made me fear an aneurism. He was distressed after eating and could not work on account of debility. I prescribed as well as I knew how for five times and every time he came back I thoroughly examined him with very little improvement. By this time I made up my mind that he had no organic trouble at all and looked for the reflex origin of it and found a long, moist foreskin, several hemorrhoids, a few pockets and papillae, without any symptoms whatsoever in these parts. When I told him what I wanted to do he almost got indignant and made the remark: "I am not sick down there but up here." I tried to explain through his interpreter the nerve connection and he finally consented to go to the hospital, where I circumcised him, removed the rectal pathology and gave the sympathetic nervous system a chance to function, and the third day he was free from his stomach distress and in ten days his boarding housekeeper told me he could eat as well as the rest of them.

These three cases cited simply show what an irritation of the sympathetic nervous system will do to disturb the peristaltic rhythm. I could cite to you many more cases. I took these cases because it gives you ages of infancy, at 10,

and 50 years of age, showing that all ages should be kept in mind and thorough examinations made. To cure these chronic cases you have to look where the other fellow doesn't. It is time the odium of prescribing a little medicine on just symptoms alone be removed and the actual causes of weakened constitutions and disease investigated in a more painstaking manner. By attending to these things more thoroughly and normal functioning of the sympathetic system restored, a multitude of ills could be avoided and major operations would be more successful if those things would be looked after at the time. The surgeon removes the products of disease but does he attend to the things that devitalize the sympathetic nervous system and are really the cause of poor functioning and inability to resist invading bacteria and toxins saturating the blood current of our bodies? Let us be more honest with ourselves and investigate more and more than we ever did. Let us chuck a good portion of our traditional medicine and start on proven facts for a foundation, and the superstructure of our medical knowledge will be more artistic in its application and a Godsend to humanity.

Calculus Impacted in a Vesical Diverticulum Removed by High Frequency Cauterization.—H. W. E. Walther (*Jour. Urol.*, 1918, II, 325) reports the case of a farmer, seventy-nine years of age, on whom an operation for the removal of a urethral stricture and for hypertrophy of the prostate had been done ten years before. The operation done at that time consisted of suprapubic prostatectomy and external urethrotomy. After that the patient remained comparatively well for nine years, and then developed frequency of urination both in the daytime and at night. A cystoscopic examination revealed a small white tumor on the right side of the bladder. Palpation by means of the ureteral catheter showed that the mass was solid. Walther then introduced a Bugbee high-frequency cautery electrode and applied the Oudin spark current. He made a diagnosis of stone. The spark was next applied to the neck of the diverticulum, the tip of the electrode was forced into the mucosa. Marked penetration was secured by employing a wide spark gap, multiple areas being treated in this way. Two days afterwards an examination was made with the operating cystoscope. It showed that where the calculus had been, there was a collapsed diverticulum with sluffing edges. A stone in the shape of a dumb-bell could be seen lying free in the bladder on the trigone. It was removed with the Buerger forceps. The most interesting features of the case were the odd shape of the calculus and the fact that most of the stone was hidden in the vesical diverticulum.

EDITORIAL

THE DOCTOR AS A FINANCIAL VICTIM.

MANY years ago, we wrote a series of editorials, the first one of which was entitled the "Gold Mine in Front of the Door." The initial of the series was designed to teach the physician that his entire financial interests rested in the development of his practice and if he happened to be so fortunate as to save something, that something should be invested for security rather than for large returns; and also that so far as possible, investments should be made in home enterprises rather than in far away places, as Greenland's icy mountains and India's coral strands. We quoted instances where eminent physicians had been presented with stock in plausible enterprises in order that promoters might be enabled to give a semblance of strong professional backing.

Prior to the publication of the editorials, we had been in almost daily receipt of advertisements showing how our money might earn for us 12 per cent. and upwards. After a time, these advertisements ceased to come to us. The financial sharks promoting the various schemes evidently had an information bureau which kept an eye even on the smaller medical journals.

With the close of the war, wild financiering has broken out once more. The newspapers are giving repeated warnings to their readers. The prevailing scheme seems to be designed to get investors to part with their Liberty Bonds in exchange for the stock of corporations alleging to pay high returns.

The impudence of some of the men engaged in this nefarious business is beyond all description. However strong may be the words we use to indicate the situation, the language is not strong enough to fit. Their ingenuity in meeting one's criticisms is more than amusing. One of these gentry called upon us to get us to invest in a "sure thing." We listened; and then we said: "In the ——— Building, a couple

of millionaire gentlemen by the name of ——— and ——— have offices. You call on them and explain your proposition. They are greedy for 6% and 7% investments; but when they learn you have one insuring over 12% they will lock their office doors, and will not permit you to leave until you have sold them *at least* 51% of your stock." And then came the reply: "Exactly so; they will insist upon having control of the corporation, and we can not risk the interests of our minority stockholders by permitting such men to manage our company." And we said: "Whatever these men have managed, they have always managed well. Good day." And he went.

Doctors must remember that in practically all instances high dividend returns are suggestive of instability or lack of safety of the principal. Liberty Bonds, which are absolutely safe, bring 3½ to 4¼ per cent. Certain speculative securities bring higher rates, but the investor is never certain of his principal. They may pay their dividends for a time but ultimately many of them go to the wall.

Quite recently a number of physicians have been annoyed by the methods of a few so-called investment brokers who have seen fit to utilize the telephone for interviews. They seemed to have no discretion as to the value of the physician's time, for about the only way to terminate the interview was by abruptly hanging up the receiver. We angered one of them by saying: "The broker who solicits the business of the doctor is like the business man who borrows money of a woman; he cannot find anyone else to trust him." Our reader can rest assured that this is certainly the case, for no man is likely to spend a lot of time over the few hundreds that the doctor can invest, when the same amount of work will bring larger returns directed to persons of business capacity. Good things, as a rule, are not hawked around, but are kept within a small and chosen circle. Promoters are not Samaritans seeking out deserving and obscure physicians to make out of them the future Rockefellers and Carnegies.

Moral: Hold on to your Liberty Bonds. Uncle Sam's returns are small, but he is a dead sure payer.

Post Scriptum.—For the benefit of our readers we respectfully announce that we have received a circular from a promoter who wishes to let us in "on the ground floor." He

enclosed a slip which showed that in certain business enterprises original investors realized all the way from $14,000 to $100,000 for each $100 invested. The promoter introduces himself to his prospective clients with a little prologue, 10 per cent of the words thereof consisting of the pronoun in the first person singular. How attractive this all sounded to the poor doctor!

If our foresight had only been good, we ourselves could have realized $14,200 on each dollar invested in certain war securities. But then again we might have lost our dollar, and besides we would have been worried to death over the manipulations necessary to make that dollar move rapidly.

In all seriousness let the physician invest wisely and conservatively. Let him place his savings where they need cause him no worry. It is true that we know of a few—a very few, indeed—of our profession, who have made lucky strikes, but these few do not amount to more than one-half of one per cent. of the many who have lost the savings of a life time by listening to the arguments of promoters.

Our morning paper is calling attention daily to the number of these men who have sprung up within the last month or two. The Liberty Bond seems to be their particular goal. Offices in close proximity to savings banks are especially attractive to them. The evil has grown so great that respectable tenants of such buildings have taken a stand, and landlords and agents have been forced to take definite action against the swindlers.

HOT FOOD AS A DISEASE PRODUCING AGENT.

In the last volume of the "Collected Papers of the Mayo Clinic," the Mayos called attention to the possibility of hot food being an important factor in the production of cancer of the stomach. The argument presented is a sound one and should be respected as worthy of attention.

A writer in the December issue of *Progressive Medicine* likewise inveighs against hot food, and gives instances in his experience where the patient gave up the habit of taking hot food and the symptoms of indigestion disappeared without attention to any other detail.

One has but to note the increasing epicurean tendencies

of the better classes especially to be impressed with the practical value of the above annotations. The best hotels of the day are managed on the European plan with meals served *a la carte*. Special menus for those in a hurry are obtainable at limited hours. These like the "served to order" portions come on the table "steaming hot," and are eaten with not any too great deliberation. If, as is not unlikely, liberal quantities of ice water are sandwiched in between mouthfuls of hot food, we unquestionably have an abundant cause for gastric disease.

Even in the home, the demand for hot food is on the increase. Coffee in particular must be served at a temperature which the mouth cannot stand. Specially designed coffee urns are on many tables, and these maintain the beverage at a temperature but little short of 212° F.

We have long believed that in the majority of instances, it is not the particular articles of food we eat that produce disease, and accordingly must be regulated; but it is the associate dietetic factors. These include quality of the raw material as to preservation or maturity, methods of cooking, preparation for table as in seasoning, quantity of food taken, temperature of food, time taken for the meal, the environment of the dining room as to congeniality of the family and aesthetic settings, and a short rest before resuming work.

C. B.

DIABETES IN CHILDREN.

RECENT advances in the treatment of diabetes have modified in a decided manner the course of the disease and have led us to change our views on diabetes in children. In the past, our experiences with this disease in childhood were so discouraging that it was scarcely deemed worth while to put the child upon a rigid diet, especially since this was considered a difficult matter to carry out and as a fatal termination was looked for within a few months. Cases rarely lived a year after the disease was once discovered. It is true that an exceptionally mild type of diabetes is occasionally encountered in children and that cures of diabetes in children are reported. In the majority of instances, however, we see diabetes in its worst form in childhood.

Joslin, in his excellent work on the treatment of diabetes, gives some interesting tables showing that whereas under the old regime the duration of life of his cases under ten years old was 1.4 years, today many of his cases are still living, with an average duration of 2.6 years.

One of the old notions about diabetes in children, namely, that treatment is difficult to carry out, is unceremoniously upset by Joslin with the following comments:

"Children make exceptionally good patients. This is probably due to an early discovery of the disease and to vigorous treatment. Almost invariably children become sugar-free for a shorter or longer period. The diet is borne unusually well, and as a rule, without complaint. In favorable cases growth takes place quite as in healthy children and it is this growth which frequently deceives the physician and relatives into believing that the disease has disappeared and has led to relaxation in treatment. In other cases growth is retarded.

"The methods of treatment of children with diabetes are precisely those of adults. Rigid dieting offers more comfort to the child than to allow freedom in eating, and furthermore, I am convinced that rigid dieting is more effective in prolonging life than neglect to follow dietetic rules. Parents occasionally renounce regulation methods and adopt quack methods. In not a single instance has the child done as well as before the change was made and my statistics show the penalty. The diet of children with diabetes from the age of two upwards requires surprisingly few modifications of that of an adult. Fasting is borne perfectly well for a few days, and with comparatively little complaint."

There is unquestionably a close interrelationship between the various metabolic disturbances encountered in infancy and childhood. Acidosis, for example, which was formerly looked upon as belonging strictly to diabetic coma, may be demonstrated during attacks of cyclic vomiting, recurring fevers and other clinical conditions. The "alimentary intoxication" of Finkelstein with its glycosuria is an acidosis as has been proven by Howland. It would be interesting to determine whether children who are subject to these metabolic disturbances are potentially diabetic and are more likely to develop diabetes in later life than other individuals. C. S. R.

GLEANINGS

MATERIA MEDICA AND THERAPEUTICS.

Influenza Remedies.—In a paper read before the Philadelphia County Homœopathic Medical Society, November 14, 1918, Dr. Wallace McGeorge says: In the terrible epidemic of influenza that visited us last month and is now passing over the Western States, homœopathy has come out with honor. Many people are alive today because of the curative action of homœopathic remedies, carefully prescribed and conscientiously given.

Some of our physicians who have been called to attend the sick and dying in emergency cases in our hospitals have been sorely tried, yet even these have had cause to rejoice in the curative action of homœopathic medicines.

The list of remedies I used is not large. Aconite, bryonia, eupatorium, gelsemium, lachesis, nux vomica, phosphorus, sticta, sulphur, and tartar emetic covered every case.

Of all these remedies aconite stands out pre-eminently. Every patient but one that received aconite recovered, in many cases without the help of another remedy. Next to aconite came bryonia, then eupatorium, later lachesis or phosphorus, according to the character of the cough. A few cases needed tartar emetic. When bryonia did not relieve the bronchial cough sulphur did. For the dry, persistent, worrying cough that remained after bryonia, sticta was curative. For the great weakness and exhaustion with loss of appetite nux low worked charmingly, and in many cases completed the cure, and enabled him to return to his daily toil.

Indications for the Remedies: When the patient came in with an anxious look or when he was possessed with an indefinable fear, aconite was thought of. If he complained of aching all over, or was cold and chilly, when the temperature ranged from 96.3 to 97.3 degrees, and he could not get warm, aconite low was sure to help him. If he or she had a dusky color in the face, particularly in the forehead between the eyes, when the hands were cold and the chill ran up his back to the head, when the lower part of the face was cold but the forehead was warm, aconite was surely indicated. At first I prescribed the 30th potency, but soon found the third potency worked quicker, and later on I gave the first dilution in nearly every case. My rule was to give a dose every half hour till sweat came, then every hour till the aching entirely ceased. Under this procedure my cases recovered; in many cases aconite alone completed the cure.

If the aching was only in the back, if he complained that his back felt as if it would break; if every bone in his body was breaking, eu-

patorium perfoliatum, the old-fashioned boneset, was the remedy. Many physicians used this drug in the tincture but Boericke & Tafel's thirtieth potency cured all my cases, relieving them in from six to eighteen hours. Most of my patients complained only of the terrible backache, but two or three of them had the broken bone feeling so typical of this drug.

Gelsemium was helpful when the patient sneezed a good deal with running of the nose. One peculiar symptom which I observed many times, and which I had myself one day, was a severe pain in the occiput, worse in the lateral lobes of the cerebellum. Walking was painful, riding in a carriage aggravated the pain, but pressure on the lobes relieved the pain as long as the pressure was applied. Allen, in his Encyclopædia of Materia Medica, gives a part of this symptom under gelsemium. If the patient was drowsy or had pain in the occiput or pain in the liver with slow pulse, all the more surely was gelsemium indicated. The thirtieth potency cured my cases.

Bryonia was helpful for the bronchial cough which set in the second or third day. Every time he coughed he had a pain from the bifurcation of the bronchia half way down the sternum, a splitting, painful cough. If he kept quiet in bed and warm, this cough was somewhat relieved. When the patient felt better from resting or from keeping quiet, bryonia was all the more indicated. I got the best results from the third potency.

When the cough was more in the throat, with or without constant tickling, or if they complained more of the throat than anywhere else, it was so sore and hurt so much when he coughed, Lachesis was the remedy. The thirtieth potency cured my cases. When the cough woke the patient up, or when he coughed more after waking, just as soon as he woke, was another indication for lachesis. Some of these coughs persisted for days, but Lachesis eventually cured them.

When the lungs were involved—in most of my cases the lower lobe of the left lung was the part affected—when they were sore on the chest from coughing, when the sputum was whitish, or whitish-yellowish, sometimes sanguineous, phosphorus was the remedy, and I invariably used the thirtieth potency. In one case when the patient took home remedies for three or four days, and then against his wife's pleadings went to work one cold day, he soon returned chilled through. Pneumonia set in, and when I was called late that night he was a very sick man. But sick as he was he would not go to bed, but sat up in a rocking chair alongside a window. I begged him to go to bed, but he had his own way, and in two days his heart gave out, and in a little while he was gone. This was my first fatality, and this case should have gotten well. After that every patient I visited went to bed and stayed there till I allowed them to sit up.

In one office case I prescribed for through her sister the patient positively refused to go to bed. After getting all her symptoms I ordered her sister to put her to bed. She said the sick woman had a mind of her own and would not go to bed. Then I gave the sister the medicine the patient needed and told her to go home and tell the sick woman to go to bed and stay there, but if she wouldn't do as I advised, to pick out the undertaker she wished to lay her out. It was rather an unfeeling message, but some people need plain talk to save them from their

own willfulness. The message was delivered, the patient went to bed, took the aconite I had sent her, and made a good recovery.

In one case of lobar pneumonia where the cough was very persistent and wearing the patient out, sticta 30, in water, every hour, gave prompt relief and hastened her recovery. Sticta cured a cough for me which kept me awake at night when I wished to sleep.

In two or three cases of catarrhal pneumonia with much rattling of mucus in the lungs, tartar emetic served me well. In one case in which I had Dr. Quint for a consultant, he gave the first trituration, but the relief was not as prompt from the crude drug as when I gave it in the thirtieth potency. But I must thank Dr. Quint for suggesting aconite very low in these cases of influenza. Tartar emetic has saved many pneumonia cases in this epidemic.

In some cases when bryonia failed to relieve the bronchial cough and when the patient stated every time he coughed he thought his breast bone would split open, sulphur relieved the cough and hastened the cure. When the patient complained of being so tired and weary, with a troublesome cough, yet did not want to keep still, sulphur was better than bryonia and brought about a speedy recovery.

In tedious cases where the patients were slow in recovering their strength, nux vomica helped me very much. Nux took away the bad taste so many had and helped them to regain their appetites. It helped to take away the tired feeling so many patients had in their feet when they started to get around. Honestly, I used more nux 1st in this epidemic than in my entire practice for fifty years. It is a good thing to know when a low potency is indicated, and as I am called a high potency man, it is but fair to say that aconite and nux in the first potency, and bryonia in the third, have helped me to cure many cases of "flu" quicker than the high potencies would have done.

In this epidemic, more than any other I have seen in a long and eventful practice, absolute rest was essential to complete recovery. So with your permission I will add REST to my list of remedies.—Homœopathic Recorder, January 15, 1919.

Serum Therapy in the U. S. Army, with Special Reference to the Administration of Serum in Pneumonia and Meningitis.—In a paper read before the *Clinico-Pathological Society*, Orthmar Barthmaier summarized as follows: For the production of passive immunity, there are being used quite a number of specific sera. Diphtheria antitoxin, tetanus antitoxin, antistreptococcus, antimeningococcus and antipneumococcus serum, the less-used dysentery and botlulinus antisera and finally the anti-gas gangrene serum and the antivenins. Incidentally has sprunginto practice the use of human immune serum against poliomyelitis, scarlet fever and the influenza pneumonia.

Some of these anti-sera have not only a therapeutic value, but have a use in preventive medicine, as the temporary immunization with diphtheria antitoxin, or the more lasting immunization when employed with its specific toxin. Anti-tetanus and anti-gas gangrene antitoxins have practically eliminated tetanus and gas gangrene.

Sera may be introduced by the intraspinous, intercutaneous, subcutane-

ous, intra-muscular and intravenous routes, together with occasional intra-articular, intrapleural, intraventricular and even into the vitreous of the eye.

The intravenous route should be the only therapeutic route except when the mechanical conditions are such, or when fear of an anaphylactic shock or other conditions suggest some other route.

In the use of sera one introduces into the system a foreign protein, and the body is bound to react from a slight febrile response to even death in one who is peculiarly sensitive, but by methods for detecting such sensitiveness and by proper desensitization such a calamity can be averted.

After an experience of several hundred serum injections we are of the opinion that if one would employ it he should familiarize himself with the mechanical details and the local manifestations.

In meningococcus meningitis one recalls that in the preserum days, 70-90 per cent. died. Serum properly employed today saves 70-80 per cent. In type one pneumonia, 30-40 per cent. out of every hundred died; today only 5 per cent. succumb, and lastly one must not forget that in these diseases the sequelae, if they did not kill, left the patient very often an invalid. These complications for the most part can be prevented.

In the diseases mentioned we held that the employment of specific sera in competent hands, after proper tests for sensitiveness and given early, in large doses and repeated, offers today the best means for combating certain types of specific infections, and its administration under the above conditions is without appreciable danger.

Lathyrus.—Hinsdale's experiments with lathyrus are not so well defined in their results as our previous knowledge of the drug would lead us to expect. Bayley has long used this remedy in a certain class of paraplegias. The experimenter observes that some specimens of the drug are inert. Whether this is due to the age of the preparation or error on the part of the manufacturer, he is not prepared to state.—*Homœopathic Recorder*, January, 1919.

Fraxinus.—Hinsdale has made animal experiments with this remedy and has demonstrated beyond question that it produces stimulation of the uterus. The organ made several long sweeping curves as indicated by the recording lever, these being five or six times the height of the normal contractions. The writer believes that fraxinus should prove to be an effective stimulant to the uterus, as for instance in subinvolution.—*Homœopathic Recorder*, January, 1919.

Cactus.—Hinsdale has experimented also with cactus, and in common with other authorities has not found it to be capable of modifying either the heart or the circulatory system. He is inclined to believe, however, that cactus acts peripherally and directly upon the heart. He claims, however, that the drug produces subjective cardiac symptoms, which of course are not susceptible of demonstration in animal experimentation. In closing his observations he says: "Most of the indications for cactus in heart disease are of a painful, neuralgic and subjective character. This being true, I think we can harmonize its remedial virtues with the lack of much pharmacological data to explain its action by assuming as just indicated, that the drug affects mostly the nerves in and around the heart by producing sensations and impulses of a non-transferable character, and that for reasons given, the animal experimenter cannot detect or record them."—*Homœopathic Recorder*, January, 1919.

PAEDOLOGY

Conducted by C. Sigmund Raue, M.D.

Anaphylaxis and Its Relations to Some Diatheses Common to Infancy and Childhood.—F. W. Shultz and W. P. Larson (*Archives of Pediatrics*, Dec., 1918) discuss the question of idiosyncrasies to food displayed by certain children in its relation to the phenomenon of anaphylaxis. They call attention to the fact that many phenomena occurring in these conditions are almost exactly parallel to those exhibited in experimentally produced anaphylaxis. It is a striking fact that idiosyncrasies to cows' milk and other foods are more common at this time of life than at any other time. Permeability of the intestinal tract to foreign proteins is no doubt a common disorder in young subjects and occurs more frequently and is more readily induced in the anatomically immature gut of the child than in the adult. The same holds good in the case of animals as has been repeatedly demonstrated in laboratory experiments. The associated phenomena of anaphylaxis, namely asthma and skin manifestations, are as a rule closely linked up with the evidence of a constitutional diathesis, such as the exudative diathesis of Czerny or its equivalent the neuroarthritic diathesis of Comby and Marfan.

The symptoms of idiosyncrasy to cow's milk occur shortly after the ingestion of the same and are repeated vomiting, pallor and cyanosis, restlessness, tremor, cloudy sensorium, diarrhoea and hypo- or hyperthermia.

Idiosyncrasy to eggs is another form of food anaphylaxis which is occasionally encountered. Angioneurotic endema, asthma, vomiting and diarrhoea are the symptoms usually produced by the ingestion of egg albumin when the subject is anaphylactic to eggs.

The authors have attempted to prove that the exudative diathesis is a clinical manifestation of anaphylaxis to cow's milk by injecting guinea pigs with the blood serum from such cases and then later injecting cow's milk into the animal thus prepared. Marked anaphylactic phenomena were obtained in the animals which had received blood serum from such cases.

Child Hygiene Activities of the New York State Department of Health.—The following *resume* of the work done by the Division of Child Hygiene of the New York State Department of Health during 1918 is of interest to those who are following up this line of work. The activities of the department embrace the following: The establishment of child welfare and milk stations; securing appointment of visiting trained nurses; organization of local agencies to further the cause of child hygiene; educational work of all kinds for child welfare, including instruction in prenatal and postnatal care; obtaining provision for sick babies at hospitals; establishment of summer camps for babies and debilitated children; baby welfare exhibits; supervision of day nurseries; improvement of birth registration; newspaper publicity on child welfare; compilation of child hygiene literature; better baby contests, and adoption of pasteurization ordinances.

The acting director, ably assisted by the staff of the division, carried on work for child welfare in more than three hundred municipalities in the State. During the year, 114 addresses and lectures on child welfare were delivered by members of the staff of the State Department of Health. State child welfare exhibits, consisting of panels, movie films, lantern slides, posters,

literature and demonstration outfits, were held in fifty-five localities. One hundred and nine "Little Mothers" leagues were organized and hundreds of "Little Mothers" were graduated.

Due to the activities of the members of the division staff, appropriations amounting to more than sixty thousand dollars were obtained from private and municipal sources for the purpose of instituting new child welfare work in various municipalities.

In addition to the above, forty-one new child welfare centers were established, making a total of one hundred and sixteen in the State, outside of the City of New York; and the appointment of twenty-five additional public health nurses was secured to carry on child welfare work in as many municipalities. A child welfare center is a necessary adjunct to community life. It is the school wherein the expectant mother may learn the lessons of prenatal and of postnatal conservation of infant life. Without the educational influences which such welfare centers exert in a community, much unnecessary loss of child life occurs.

Almost 400,000 pieces of child welfare literature were sent forth from the division in 1918. This literature comprised the following pamphlets and leaflets: Before the Baby Comes, The New-Born Baby, The Food of the Baby, The Summer Care of Babies, Care of Milk in the Home, From the Bottle to Table Food, Your Baby—How to Keep It Well, Vaccination, Amusements for Convalescent Children, Milk and Its Relation to Public Health, Diet Lists from One to Six Years, Outlines for Organizing and Directing "Little Mothers" Leagues, and Prenatal Care. Many of these were printed in English, Italian, Polish and Slovak.

DERMATOLOGY

Conducted by Ralph Bernstein, M.D.

Fruit Ingestion and Cutaneous Diseases.—According to Davidson, if all fresh fruits were eliminated from the dietary, one-third of the sickness incidental to childhood and early life would be avoided. From this is not meant to be implied that all fresh fruits are bad, but Davidson insists that so many of them are unwholesome in their raw state that the statement holds good nevertheless.

He says that the orange is the most harmful of all our California fruits; that while the strawberry outranks it as a cause of urticaria, the orange is more likely to cause the furred tongue, cloyed appetite and general depression —a group of symptoms that are classed as biliousness.

It is reasonable to assume that any fruit that is liable to cause urticaria contains some element which may at any time prove unwholesome. In many individuals urticaria quite frequently follows the ingestion of fresh fruit. Davidson states that this disease as well as many of the eczemas of childhood are in reality but the expression of the anaphylaxis produced by the protein in the fruit. According to Davidson, oranges, which exhibit their poisonous tendencies most intensely when eaten fresh from the tree, if kept in cold storage for a few weeks lose these poisonous qualities and may be eaten without danger. Dried dates, figs and raisins are valuable foods and apparently have no direct action on the skin. Of the dried fruits figs alone possess a

laxative reaction. Two or three figs eaten before retiring produce good results in mild cases of constipation. This quality is only possessed by the imported fig, as our California figs do not have it. Raisins, if eaten freely, may cause an irritative diarrhoea and in a peculiar way; the skins, being tough and hard to digest, are likely to adhere to the valve conniventes, where they may remain for sometime before irritation is produced.—*Jour. Cut. Dis.*, October, 1917.

Treatment of Dermatitis Venenata by Vegetable Toxins.—A. Stricker undertook this study for the purpose of throwing some light on a number of factors in connection with dermatitis venenata.

First, the elaboration of an endermic test in order to determine to which one of the poisonous plants the particular individual was susceptible.

Second, to find out whether the intramuscular injection of the vegetable toxin derived from the homologous poisonous plants would influence the course of dermatitis venenata.

Third, to determine whether the desensitization of individuals against dermatitis venenata by the intramuscular injections of the homologous vegetable toxin is possible; how many injections are necessary for the process of desensitization, and over what period of time such a protection would last.

Fourth, to determine whether complement-fixing bodies could be found in the serums of patients who had had an attack of dermatitis venenata and had been treated by the injection of the homologous vegetable toxins.

The first attempt to isolate the active principle of oak or poison ivy was made by von Mons in 1779. Maisch, in 1865, isolated what he termed toxicodendric acid, which substance was shown to be entirely inert. The active principle of poison oak or ivy is shown by the most recent work to be a substance of a glucosidal nature which upon analysis yields gallic acid, fisetin and rhamnose. The poison is non-volatile even when mixed with acetic acid or alcohol. This glucosidal substance is extracted from the fresh leaves with absolute alcohol, filtering and precipitating. The precipitate is dried and extracted in Soxhlet extractors for ten hours. The extract obtained is dried at a low temperature. The toxin is carefully weighed and dissolved in absolute alcohol to which a certain amount of sterile distilled water is added to make it non-irritating. This is the method by which the poisonous principles of ivy, sumac and nettle were obtained which were used in their experiments. A total number of twelve patients were treated, an attempt being first made to determine to which of the various plants the individual was susceptible. The serum of seven patients was studied by means of complement fixation and in every instance the reactions were negative. The antigens employed were ivy, sumac and nettle and the cholesterolized syphilitic antigen was also employed. This latter antigen was also negative in all the serums tested.

Strickler is of the opinion that the intramuscular administration of the toxin of the various poisonous plants has an influence on the course of dermatitis venenata, but he does not advocate this method of treatment as a routine procedure except in very severe cases or when there is a desire to attempt desensitization. That the immunity of dermatitis venenata is a tissue immunity, fleeting in character and one that has to be often renewed, is a deduction from his own observations as well as the experiments of others. He inclines to the belief that it will be possible to desensitize individuals

against dermatitis venenata although his experience as yet is limited.—*Jour. Cut. Diseases.*

Causation of Eczema, Urticaria and Angioneurotic Edema.—Chandler Walker reports instances in which eczema, urticaria and angioneurotic edema were produced by proteins which are not foods, but with which persons intimately came in contact throughout life, and which have not so far been recognized as possible causes of these conditions.

Four of the cases of eczema were caused by the proteins of horse dandruff, one by the pollen of timothy and one by the pollen of ragweed.

Five cases of urticaria were reported, two of which were caused by horse dandruff and the remaining three by ragweed pollen.

Three cases of angioneurotic edema were reported which were caused respectively by timothy, flaxseed and ragweed pollen.

It is to be noted that with the exception of one patient, who was suffering from hay-fever, all had bronchial asthma which was caused by the same proteins as were responsible for the skin conditions mentioned.

It has been conclusively demonstrated that the proteins above mentioned may cause eczema in predisposed persons both from external exposure and internal injection. Eczematous patients tolerate very small doses of the offending protein and the condition seems to improve. However, a slight increase in the dosage makes the eczema worse.

In dealing with urticaria it would seem advisable, since subcutaneous injections of the proteins of horse dandruff and ragweed pollen produce urticaria in certain cases, to exclude all protein substances with which the patient may come in contact, as well as the food proteins, in determining the cause of the disease. This same logic would seem to apply to cases of angioneurotic edema.

The Treatment of Eczema in Childhood.—To the dermatologist the eczema of childhood has always been one of his difficult problems. However, since the introduction of fecal examinations and cutaneous food tests, the pediatrician has been shouldering more and more of this burden; in fact, some have made the assertion that eczema in childhood should be considered within their province, predicating this claim upon the belief that the treatment of this condition is solely one of feeding. Dermatologists of experience have no hesitancy in opposing this claim with vigor for they know from experience, gained in both public and private practice, that many pediatricians are incapable of properly diagnozing this disease; further, because they are yet to be convinced that all conditions now classified under the heading eczema have been proven to be dependent upon food poisoning, as it were.

Cutaneous food tests and fecal examinations in over 300 children and adults, extending over a period of three years, have been made by C. J. White, of Harvard, his work applying to chronic cases only. According to his records, there is no discernible difference between individual examples of eczema susceptible to proper internal care and those which are to prove not susceptible. In making skin tests the flexor surfaces of the arm are cleaned and two parallel rows of four or more incisions are made. The food particles to be tested are gently rubbed into the incisions of one of the rows, the remaining rows being left alone and acting as controls. At intervals during half an hour the arm is observed and a reddening and infiltration is considered

a slightly positive reaction; a positive reaction is represented by a definite papulation, and a double positive reaction when these characteristics are more pronounced. Inoculations during the first and second years consisted of raw food types only. Milk minus its content of fat was chosen as representing the most important food of childhood; butter minus salt representing fats; egg albumin representing proteins, and lactose and oatmeal water representing the sugars and starches. Growing experience taught that an individual might be susceptible to only one or to more of a certain group of food substances, hence the tests were extended to many individual representative foods. After an investigation lasting three years, White feels justified in making the following deductions:

1. That there are two great types of eczema—those which are curable in expert hands and those which resist even the most scientific care. These two classes are not distinguishable objectively.

2. That crude coal-tar is a curative agent in the majority of instances of moist eczema when properly used and has proved of great value.

3. That eczematous persons, both young and old, react positively in large numbers to the food tests and stool examinations. That amongst the children examined there were 66 per cent. of positive food tests and 81 per cent. of abnormal stools. It is therefore evident that food plays some part in the abnormal composition of individuals afflicted with chronic eczema.

4. That proper feeding, as indicated by food tests and stool examinations, is capable of bringing about a cure, or at least paving the way for a cure, in a large majority of cases affecting young children who eat elemental food.

5. The same successful results have only been obtained in a small minority of cases in older children and in adults; but that it is possible that this failure is due less to the value of this same knowledge than to the fact that the food eaten by this class of patients is practically always a complex substance and hence incapable of such scientific and exact preparation as is possible in the comparatively simple modification of milk. Therefore, until we are able to synthetize by means of special diet kitchens the food of older children and adults, we cannot hope to make use of these two therapeutic adjuncts in our fight against unamenable eczema.—*Boston Med. and Surg. Jour.*

Eczema Due to Deficient Thyroid Secretion.—Edelman reports the case of a boy 3½ years old. The mother, 37 years old, became gray at the age of 20 years. Her sister also was gray at 20 years of age. With the exception of this boy, the remainder of her children were normal. The boy in question was the third child. Until he was four months old the boy was well both physically and mentally. Since then he had had a scaly and weeping eruption which involved the cheeks, forehead, chin, scalp, neck, shoulders, chest and upper and lower extremities. The eruption was very itchy, especially at night. The patient had received treatment from pediatrists and dermatologists at many clinics in New York. The treatment was chiefly local and dietetic. The eruption became more extensive despite constant treatment over a period of three years.

The patient was given 0.5 grain thyroid extract three times a day. The diet was left unchanged and no local treatment was given. Bran baths were

given every night. The patient immediately began to improve, and when he returned in a short time was a different child. The eczema of the face and neck had almost disappeared and movements of the head were made with ease; the eczema on the legs was slightly improved. The itching remained about the same. Measures were taken to prevent scratching and the same dosage of the extract was continued.

Edelman points out the interesting features in the history as the premature grayness of the patient's mother and her sister, and their more or less pasty complexion, which are suggestive of deficient thyroid secretion; also that the eczema evidently bore no relation to the food. He concludes that "we were dealing with a disturbance of the thyroid gland, causing a diminished secretion, with a normal mentality—a condition of hypothyroidism."—*N. Y. Med. Jour.*

UROLOGY

Conducted by Leon T. Ashcraft, M.D.

Elusive Ulcer of the Bladder; Further Notes on a Rare Type of Bladder Ulcer, with a Report of Twenty-Five Cases.—G. L. Hunner (*American Journal of Obstetrics*, New York, 1918, lxxviii, 199) states that these ulcer areas are always small, usually measuring about 5 mm. in diameter. Sometimes they are linear and from 0.5 to 2 cm. in length, their width being from 1 to 2 mm. They then resemble the mouse eaten linear ulcer often seen in a tuberculous bladder. Frequently two or three tiny ulcers are found in the group, sometimes surrounded by a small red edematous area. They always seem to be superficial. When the patient is examined in the knee-breast posture, one may obtain microscopically clear urine at the beginning of the examination and discover bloody urine in the bladder immediately afterwards with the cystoscope. This is because the bimanual palpation previous to cystoscopy or the splitting of the surface due to distention of the bladder by the air has made the ulcer bleed.

Very often the ulcer area has around it a zone of converging vessels. Sometimes a small ulcer in one place has no edema around it, while in another portion of the mucosa an area of edema may be found without a visible ulcer. The edema is usually present after an unusually severe attack of bladder symptoms with strangury. The principal symptom is pain, with which are associated the other symptoms of cystitis in varying degree.

The author thinks that the only correct treatment is complete suprapubic excision of the inflammatory area. The operation should be kept extra peritoneal, if possible; and the bladder should be distended with air or sterile fluid. The wound is closed, leaving a mushroom retention catheter extending from a slight opening in the vertex. Two cigarette drains may also be left in the wound.

Bladder Tumors.—Nander (*Hygiea*) gives an analysis of forty-nine cases of tumors of the bladder. Hematuria was the principal symptom. It was frequently unaccompanied by pain, and had no connection with physical exertion. In two of the forty-nine cases, several weeks or months after the first appearance of blood in the urine, there were pains suggesting cystitis. Cystoscopic examination is always necessary in cases in which there are evidences of hematuria.—*L. T. Ashcraft.*

War Wounds of the Bladder.—F. Cathelin (*Lyon Chirurg*) has observed twenty-nine cases of war wounds of the bladder, fifteen of which were shell wounds, and fourteen bullet wounds. In seventeen cases urine was seen to issue through the orifice, and in eleven, hematuria was present. In seven instances, there was primary retention of urine; and in five, signs of cystitis. Cathelin says that spontaneous expulsion of a foreign body from the bladder does not occur unless the body is very small. He considers the hypogastric route the best to employ in surgical intervention, as the perineal route produces trauma in the urethra and is liable to cause inconvenience. Of the twenty-nine cases, twenty-six ended in recovery and three in death. Two of these deaths occurred immediately, and were due to the severity of the injury. The third was caused by tetanus, developing eight days after operation.

Foreign Body in Vesical Bladder.—Alexander A. Brown (*Urol. and Cut. Rev.* xxiii, February 1919, 91) reports an interesting case in a man who had been operated upon for vesical calculi, three of which were removed through a suprapubic incision. Three years later, the patient fell into a cactus bush and many of the thorns penetrated his abdomen. It was thought that all these had been removed, but two months after this accident, he began to have symptoms like those that he had had before the removal of the calculi. Cystoscopic examination revealed a foreign body in the bladder just above the interureteral bar. It proved to be a cactus thorn an inch and a half long, which had evidently penetrated the cicatrix of the old operative wound and traveled into the bladder. Another cactus thorn of the same size was removed from the cicatrix of the old scar.

Surgery Versus Radium in the Treatment of Carcinoma of the Bladder.—B. S. Barringer (*Internat. J. Surg.*, 1918, xxi, 238) describes two types of carcinoma of the bladder. The papillary type grows into the bladder; and the flat, indurative type extends through the bladder wall outward. The latter is much the more malignant. The two types are often encountered in combination. The advantages over surgery in radium treatment are that the bladder does not have to be opened and that the urine is an aid, instead of a hindrance, acting as a screen to the normal parts of the organ when the radium is placed in contact with the tumor.

Since October, 1913, forty-three cases of carcinoma of the bladder have been treated by the author. Five of the forty-three cases are well. Three of the other cases are probable cures. Barringer believes, on the basis of these cases, that radium will do as much as surgery, and perhaps a little more, in the treatment of carcinoma of the bladder. With one application of radium, one can accomplish as much as with fifty applications of fulguration.

The Uses of Radium in Tumors of the Urinary Bladder (Second Communication).—Henry Schmitz (*Urologic and Cutaneous Review* xxiii, No. 1, Page 10) in a second communication on this subject, tabulates results as follows:

CARCINOMATA VESICAE

Operated		Inoperable		No report or otherwise
Living	Died	Living	Died	1 died from sepsis after
21	5	28—36	2—6	surgical removal of growth
		8—3	6—2	

TOTAL 11.

CARCINOMATA PROSTATAE

Operated		Not Operated		No report or otherwise
Living	Died	Living	Died	3 no report; 1 died from
7—5	3	10—8	6	urethral fever
6		8—4		

TOTAL 13.

CARCINOMATA URETHRAE

Living	Died	No report
32—7—3	8—4	1

Urethral caruncle: 1 well 19 months.
Urethral caruncle: 1 well 9 months. TOTAL 8.

He says that the number of cases and the time elapsing since the treatment are not sufficient for drawing any conclusions of statistical value. The results were remarkable in regard to the amount of temporary relief and local healing, considering that malignant tumors of the bladder, prostate gland and urethra are usually inoperable when seen by the surgeon. Radiotherapy is valuable in these diseases, and should be the treatment of choice. It is without danger to the patient, and does not produce much suffering. One should first produce a degeneration of the cancer area before attempting any surgical eradication; and the operation should be followed by another course of actinotherapy.

Report of Four Cases of Malignant Disease of the Urinary Tract Treated by Radium.—Winfield Ayres (*Urologic and Cutaneous Review* XXIII, No. 1, Page 8) reports four cases in which great benefit was derived from the use of radium; although, as he admits, the cases had been under observation too short a time to be considered as cured. He has discarded the intravesical method of applying radium on account of the fact that it seems to hasten more than to retard the disease. He considers it safer to employ gamma rays in beginning irradiations, because any growth that has been stimulated by radium irradiations is exceedingly difficult to control thereafter. If massive dosages are not satisfactory, intravesical applications may be used. There is not, however, much likelihood of success, for, owing to the situation of the tumor, the amount of radium needed is out of proportion to the amount required for a tumor of the same size to which the radium may be applied directly. The author thinks that as much cross-radiation as possible should be employed. The reason he commences with massive gamma irradiation is that too small a dosage stimulates cell proliferation. In intravesical applications, the tumor substance absorbs all the beta rays in the part next to the radium, and only the gamma rays reach the base. Owing to the small applicator and the short time of exposure, not enough gamma rays can be projected to do more than stimulate the base. Unless

the application is maintained in constant apposition to the tumor, even the superficial part will receive only the gamma radiation.

Tunneling of the Prostate in the Treatment of Hypertrophied Prostate.—G. Luys (*Paris, Chirur.*, 1918, x, 5) states that this operation has a double purpose: (1) destruction of the prostatic bar between the bladder neck and the posterior urethra; (2) the circular tunneling of the prostatic lobes which have become approximated in their whole extent. The operative technique has been described by the author in former articles. The procedure is indicated in many cases in which the prostate is not very large. When, in such cases, there is not much retention, prostatectomy is not called for. The tunneling operation does not require general anesthesia nor hospitalization. It is not dangerous, and is applicable to cases in which the function of the kidneys is impaired. The effects are immediate and lasting. The author has done thirty-one tunneling operations with satisfactory results.

Prostatism.—W. T. Briggs (*Kentucky Med. Jour.*, 1918, xvi, 334) prefers the term prostatism to prostatic hypertrophy because he considers it more comprehensive. In cases of acute prostatic congestion of urine that are too severe even for a suprapubic cystotomy, he lays great stress upon the use of the indrawing catheter. Of twenty-two such cases that he reports, twenty-one were in married men, only one of whom was a negro. The oldest patient was eighty-two and the youngest, fifty. The average age was sixty-six years and the average age at which symptoms had begun was sixty-two. The symptoms had been present for only a few weeks in the youngest patient; but in a number of the cases frequent urination had existed for at least ten years. The author believes that infection of the prostate may be the cause of pathological changes, but considers it more reasonable to think that the infection is an effect of the prostatism, rather than its cause. In his cases, polyuria, especially at night, was the most common symptom. Eleven of the patients had complete retention at the time they were first seen. Only four patients have a history of hematuria, and this was not a symptom in any of the four cancer cases. In two of the three cases in which sciatic pain was present, the condition was malignant. In four cases, symptoms of a mild uremia were present. As a usual thing the specific gravity of the urine was low. Albumin averaged one or two plus; reaction acid or neutral; urea, 0.5 to 1 per cent.; red blood cells, negative or one or two plus; pus cells, from one to four plus. There were nine cases in which no operation had been performed. In two cases, the condition having been diagnosed as carcinoma, radium treatment was advised. This was refused in one case and accepted in the other. It produced improvement for a time, but this was followed by rapid loss of all that had been gained, probably due to a metastasis of the right hip. While the author believes that radium treatment probably offers more than surgery in cases of cancer of the prostate, he feels that it is not of much avail when the carcinomatous process is extensive. Prostatism should be relieved by prostatectomy except in cases of malignancy and when there is obstruction due to contraction of the neck of the bladder. The mortality from this operation is very low, when one considers the age and usual condition of these patients. The greater part of this lessening in mortality is caused by improvement in pre- and post-operative treatment.

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MORAL DEGENERACY AND ITS SURGICAL TREATMENT.

BY

H. L. NORTHROP, M.D., F.A.C.S.

Professor of Surgery in the Hahnemann Medical College of Philadelphia.

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THE world at large is seriously concerned in this day and generation with the moral and physical uplift of the human race. Charity, benevolence and altruism are the key-notes that pervade the thoughts, words and deeds of a vast number of God's noblemen. "Faith, hope and charity, and the greatest of these is charity," are words which have found the prophetic fulness of their realization in twentieth century philanthropy. Decade after decade has brought scientific discovery and has placed the art of medicine and surgery upon the high pinnacle of usefulness which it occupies today. Marvelous, indeed—aye, miraculous—are the surgical feats accomplished before our very eyes. These are the days of constructive surgery. We often see the advertisement, or sign, "carpenter and builder"; if professional advertising were practiced we would see "surgeon and builder." Whether it be the removal of a part of the nasal septum, or the introduction of a bone graft in a fractured femur or tibia; an advancement of one of the ocular muscles, or a suspension of the stomach for gastroptosis; a Moschowitz intrapelvic suture for prolapsus recti, or a tendon transplantation—the surgeon is a builder, assisting and assisted by nature, and often accomplishing the result in a quicker and better way than nature would, or could, or perhaps securing the result where nature would fail altogether.

But the real surgeon of today is not a mere mechanic, a builder in that sense—he is an artist in the broadest, truest sense. The human body is his canvas, his instruments are his brush and colors which he applies now here, now there, until he obtains the proper anatomical outline and perspective and the required physiological blending, thus paving the way for a harmonious ensemble of function, otherwise known as health.

I need not rehearse for you the many advances in surgical practice during the past year; your acquaintance with current medical literature and society proceedings is sufficient to impress you with the significance and importance of recent surgical progress. I am aware of the custom, a most commendable one, of reviewing and commenting upon the noteworthy achievements of surgery in a set oration, or address, such as I am asked to present to you this afternoon, but I assume that you are familiar with all this, and I have the temerity to depart from common usage on such occasions and to offer you something which is, to say the least, out of the ordinary. Whether my effort meets with your approval remains to be decided. Though you may, in your judgment, pronounce me "guilty," I hope you will add, in your leniency, "recommended to mercy."

Wonderful indeed have been the results obtained in abdominal and thoracic surgery, but these results are possible today only because abdominal and thoracic operations have passed through an experimental stage, or a probationary period, so to speak, until they have finally "come unto their own." It may be said that the surgery of the brain and spinal cord is more or less in an experimental condition at the present time, that it is passing through its crucial period. Guided by able masters of neurological surgery it will ultimately be established upon sound surgical principles applied to its special and peculiar needs. Much has already been accomplished to warrant this belief, and the day is at hand when the list of intracranial and intraspinal lesions which will be amenable to surgery will be considerably lengthened.

Again, the evil man, the criminal, is now looked upon as a sick man, one who needs moral reform and uplift, one who deserves compassionate care rather than brute efforts to conquer base desires by long terms of imprisonment and capital punishment. Apropos of this point, how significant it is

that in six States of the Union capital punishment has even now been relegated to antiquity, while it is about to be abolished in the State of Pennsylvania. Last fall in your own Sing Sing prison, upon the recommendation of Warden Osborne (I believe) a staff of prominent medical men, including alienists and surgeons, was appointed to organize and conduct a psychopathic clinic, that the mentally diseased inmate may receive appropriate training and treatment, and that he may thus be separated from the wilful, vicious criminal. "Mens sana in corpore sano" is just as desirable today as when uttered by Juvenal in the first century. Juvenal prayed for a sound mind in a sound body, and Dr. Johnson said that "every man is a rascal when he is ill." I will paraphrase these words of the great moralist by saying that every man is ill when he is a rascal. (And for the present I prefer the revised version to the original.) Indeed, if we follow the example of the Great Physician we will heal the mind ofttimes in preference to the body. The miracles wrought by the intelligent administration of drugs, the victories over accident and disease achieved by surgical measures, epoch-making though they be in importance and in value of results obtained, cannot outshine an operation which will convert the sinner, cure the kleptomaniac, purge man's character of vice and debauchery, estrange Dr. Jekyl and Mr. Hyde, and restore man to his inherited honor of "the apex of creation." You ask the question, "Can this be done?" History answers, "It has been done." And history repeats itself.

Do not accuse me of offering you a picture too rosy-hued, one too filmy and nebulous for realization. The millennium is not yet in sight and will not be precipitated by anything I may say in my humble effort this afternoon. The fact remains that *some* moral degenerates can be morally bettered, or, perhaps, cured, by a properly and intelligently applied surgical procedure. This has been made possible by a more or less accurate, practical knowledge of the location of man's mental functions, a part of the art of phrenology, whose fundamental principles, widely accepted today, unite the anatomy and physiology of the cerebrum and of the cerebellum intimately and harmoniously. Right here we should recognize the credit which belongs to pathology in determining and locating so many hitherto obscure cerebral functions and nervous phenomena. Injuries of the head, hemorrhages, tumors

and inflammation within the cranial cavity, by resulting in altered sense and nerve performances, and whose exact location and extent were discovered by operation, or oftener by post mortem, have piled up a wealth of neurological data and have thrown much light on both the anatomy and physiology of the whole nervous system. In some cases the lesion can be definitely located and is superficial, or cortical, and frequently can be removed.

I say, "can be definitely located." This is made possible by an application of the well known rules of cranio-cerebral topography and localization, and by recognizing, accepting and employing the principles and discoveries of the art of phrenology, whose value has undoubtedly been greatly underestimated as a helpmeet to the surgery of the brain.

Even the opponents of phrenology must concede that the skull is subservient to the brain, whose shape and size determine, aye, fix, the shape and size of the skull. The direct relationship between the bones of the skull and the fissures and lobes of the brain has helped materially to place cerebral localization upon its substantial basis today.

My experience with this class of cases has necessarily been limited. The results of my work have been such that it is with pardonable pride that I speak hopefully and encouragingly of the possibilities of surgical cure in at least some of these deplorable cases. The efforts of well-meaning individuals to reduce and limit the number of imbeciles and moral degenerates of the land need not deter any neurologist or surgeon from carrying on his studies (and experiments, if you insist), in those unfortunates who need something more and something better than the average home or public institution can possibly afford. Of course it is understood and accepted that the majority of subjects classed as moral degenerates cannot, by any means known to man, be regenerated in mind or morals, but it is my personal belief that the minority of those cases under discussion, those who can be morally benefited by surgical operation, is larger than at first sight appears.

At the present time my experience along this line has been with fourteen cases. Some of these were unpromising from the beginning, and the study of the case and the operation were undertaken at the earnest solicitation of parents and often with the full consent of the patients, who were cog-

nizant of their moral defects and of the uncertain and doubtful results of surgical treatment.

Case 1. Male, age 22 years. When 5 years old, fell off a fence, striking back of head. At the age of 15 began to smoke, drink, and steal money; later, he forged checks and exhibited a general criminal tendency; is now incorrigible; is a kleptomaniac; other brothers and sisters normal. No home, school or institution influence seemed to have any control over his habits.

Examination of his head shows a large scar in the right parietal region, posteriorly.

My operation, performed in January, 1909, consisted in the removal of a depressed area of bone, the result of a previous fracture, and the breaking up of extensive, widespread adhesions of the dura to the underlying arachnoid and pia, beneath the old scar.

This man's recovery was uninterrupted and three years after his operation he wrote me as follows: "While I cannot assure you of the success of your operation upon my head, preferring to leave that question to others to decide, I will say that at the time of the operation I was a pretty good example of the intemperate man. I have long ago given up all drink and this, along with the operation, has helped me to develop a good, strong will power. You know, and I have found out since the operation, that a full recovery from a habit of intemperance is practically impossible unless a man places something in its stead—the brain faculties will not develop under reverse conditions any more than a fellow can gain self-respect by associating with crime. I am feeling better in every way and this, along with my present work, gives me a chance where I had none while under the control of drink and an unrepaired fracture of the skull."

(This patient was at this time employed at "The Self Master Colony," Union, N. J., rescuing fallen men from a life of crime and immorality. I do not know his whereabouts or condition at the present time.)

Case 2. Miss L. H., age 24. Forceps delivery with injury to head; walked when 10 months old, but fell frequently, then did not walk until 18 months old. Did not grow after 13 years of age; is nervous. Scar and bony depression above hair border to left of median line.

Dr. W. D. Bayley, neurologist, to whom I referred this

patient, reported as follows: "I am of the opinion that there was a cortical, or an extradural hemorrhage at childbirth over the left Rolandic area, especially over the arm center, which has caused the partial hemiplegia and resulting athetosis. She has decided choreiform twitchings, especially of the right side of the face, but I do not feel that this is a genuine chorea. I advise an exploration of the Rolandic region on the left side, and either after, or before, a careful refraction to remove eye-strain which, in itself, I have known to keep up a chronic choreiform condition."

At operation I removed the depressed part of the frontal bone, uncovered a very thick dura, beneath which were adhesions, an edematous pia, and pale, sodden, unhealthy-looking frontal convolutions. The girl's eyes were refracted later and a compound hyperopic astigmatism, of moderate degree, was corrected.

A letter received from this patient's father, one year later, states that his daughter was not benefited at all by my operation, that another doctor has lately found all her trouble to be located in her spine, and that she is improving under his treatment.

Case 3. T. L., male, age 48, had always been a man of good habits, was kind and devoted to his wife and children, and occupied a position of trust and responsibility in a large railroad company. He earned a good salary and was well thought of in the office of the company. He never drank whiskey or alcohol in any form. In May, 1891, a piece of heavy timber fell a distance of 16 feet from the upper structure of a float-bridge, striking him on the head and causing a contusion of the scalp and a hematoma in the upper frontal region, close to the middle line on the right side. He was unconscious for about 60 seconds. After a convalescence extending over a period of three weeks he returned to his position in the railroad office and remained there for twelve years, when he was discharged for drunkenness and misuse of the company's funds. During this period he stayed away from home for many days at a time. Remember, he never drank before his accident: now he disposed of at least a quart of whiskey daily—never less than a quart, he said, and sometimes it was three pints. He also began to spend money lavishly and helped himself abundantly to the company's funds. His accounts were audited frequently and always found cor-

rect, but his trick was to have enough worthless checks in the drawer to cover the amount which he had withdrawn and spent, on several occasions amounting to three or four thousand dollars. After being discharged by the railroad company he went to Cincinnati and easily secured a first-class position with a railroad company there, but lost it in about a year by reason of his old habit of drink and misuse of the company's cash. To quote his own words, given me after his operation: "I looked upon money and the spending of it as a thing which I was not responsible for; I spent it right and left; I may say, I threw it away, and because I did not have enough of my own I helped myself to that which belonged to the company. And yet I did not think that I was doing anything wrong—I felt that everything would come out all right. After drinking two or three pints of whiskey every day and retaining every bit of it (I never vomited) I would get up the next morning feeling well and without headache or stomach disturbance. Most of this happened the last three years before my operation." The patient himself summed up the effects of his head injury when he said that he had all of his faculties except his sense of moral responsibility.

Dr. John J. Tuller, who examined this patient, stated that he believed the man's moral degeneracy was due directly to the head injury above referred to, and that an operation should be done to remove whatever lesion might be found affecting the upper part of the right frontal lobe. My operation, performed in January, 1907, did not reveal any depressed bone or evidence of fracture at the site of the previous injury, but the dura was tightly adherent to the inner table of the skull and all three meninges were glued together over the right frontal lobe. The cerebral cortex appeared normal. I destroyed the adhesions between the dura on the one hand and the arachnoid and pia on the other, stitched the flap of dura lightly in place and closed the wound.

This patient is now devoted to his wife and children, has drank no whiskey and says that the thought of taking a drink never enters his mind. He afterwards returned to the employ of the company for which he originally worked and has been promoted twice with an increase of salary each time.

The history of this case impresses me with this fact: the undoubted direct effect of the head injury on this man's moral character. Never before given to drinking, thieving and a

total disregard for his responsibilities as a husband, a father, a brother, and a trusted employee, after the accident he let go, full sheet to the wind; he was on the crest of the wave of exaltation; he did not and could not appreciate the wrong in what he was doing. He had lost his sense of moral responsibility.

Hollander and Combe, of phrenological fame, locate the centers of exaltation, of hope and of optimism, in the ascending frontal convolutions. Here, also, in the lower third of these convolutions, are placed the motor centers which govern the muscles of expression, including, of course, those which act upon the mouth and produce, by their contraction, the expressions of satisfaction and of pleasure, of cheerfulness and of joy. Such are the facial expressions one would expect to find on the countenance of an optimistic individual, and they are strongly allied to the mental state of hopefulness and exaltation which, in turn, might naturally be accompanied by indifference for moral restraint and moral responsibility.

Gall, a world-wide authority on phrenology and discoverer of many facts relating to the anatomy and physiology of the nervous system, years ago observed, on his visits to the French asylums and prisons, that men given to stealing presented a prominent anterior temporal region. Gall, Hollander and many others have reported cases of kleptomania in which a pathological lesion involving the anterior part of the temporal lobe on one or the other side (usually the left) existed and was demonstrated either ante or post mortem. This lesion was perhaps in the nature of a bulging of the parieto-temporal region, due to an irregularity in the contour of the parietal and temporal bones, associated with a cortical cyst in the temporal lobe and possibly with other changes such as softening and degeneration of the surrounding brain tissue, hemorrhagic effusions, adhesions, etc. This temporo-sphenoidal lesion and kleptomania appeared to bear a close relationship to each other, so direct and positive as to lead Hollander to conclude that the temporo-sphenoidal lobes are in some way connected with the propensities common to man and the lower animals, while kleptomania and voracious hunger and thirst, he has demonstrated, are faculties associated with the anterior part of these temporo-sphenoidal lobes.

Case 4. Margaret G., age 13 years. When 18 months old, while her mother was confined to bed by a serious illness,

she fell from a child's high chair and struck the corner of a kitchen stove, receiving a dislocation of the left shoulder-joint and a head injury, also on the left side. When 10 years of age her kleptomaniac tendencies became manifest. She stole her mother's glasses and hid them; she stole her grandfather's pocketknife and threw it over the fence into the adjoining yard. Whenever she got hold of a piece of money she would hide it for a while and then spend it. (Kleptomaniacs usually hide and hoard their stolen goods.) In school she stole from the girls and boys and teachers, and the habit became so aggravated and obnoxious that she was expelled from the school. When scolded for her theft she would always drop her eyes, then glance up and smile and say, "I could not help it, I had to take them." An examination of her head showed slight but perceptible and positive fulness above and in front of the left ear. After her hair had been removed and her head shaved, this localized fulness showed more plainly. Believing this case to be one of kleptomania resulting from pathological changes in the anterior part of the left temporal lobe, this lesion in turn being due to the injury received in childhood, I advised surgical treatment. Before operating I sought the advice of Drs. Bayley and Hicks, neurologists, who corroborated my diagnosis and sanctioned my plan of treatment.

On November 30, 1908, I opened Margaret's skull in the left anterior temporal region, making a U-shaped flap, base downward, of scalp tissues and temporal muscle. This exposed a very irregular temporal fossa, deeply indented in front where the squamous part of the temporal bone sutures with the greater wing of the sphenoid. This acute depression lay directly over the anterior extremity of the temporal lobe of the brain, while just back of it the squamous bone bulged outwardly and was the cause of the fulness observed before operation. I next removed the floor of the temporal fossa over an area two inches, anterposteriorly, by one and one-half inches, vertically, including the entire portion of the depressed bone. I incised the dura around the margin of this bony aperture and gave escape to more than the usual quantity of cerebrospinal fluid. Adhesions were found between the meninges covering the apex of the temporal lobe. These I destroyed with a dural separator. I did not disturb the cortex; it appeared dull and soft (flabby). The dural flap was next sutured in position and the rest of the wound was closed in the

ordinary way. When first permitted to be out of bed this patient began to play her old kleptomaniac tricks, and one of the nurses reported that she stole articles from the supply closet. No attention was paid to this, however, and the child did not repeat it during the remainder of her stay in the hospital, nor has she stolen a thing since, to the knowledge of her parents or teachers. She was afterwards employed in a large department store, where she held a position of some trust and responsibility and which she filled for a considerable period of time. This girl is now married and is apparently making an ideal wife.

Case 5. T. W. B., age 24 years. Was born at full term, labor was a long and hard one and instruments were used; his head had to be moulded for days following his birth. Did not walk until two years old; did not talk until he was three years old. Probably a case of intracranial hemorrhage. Had repeated attacks of mastoiditis in both ears when a child. When 5 years old ran away from home; at 14 years of age had some delusions about being a great man, leader, etc. Was married four years ago. For past five years has forged many checks and collected on banks in which he had no deposit. Admits being a thief all his life, particularly of money; lies frequently, pawns his clothes and household goods; professes to be a church member and believes he has a dual personality; unable to tell the truth. Has only one desire and that is to please his wife and family—would willingly go to prison for years if that would cure him. Neurological examination negative, except positive bulging of left temporal area, just above and in front of left auricle. X-ray examination negative.

Operation, October, 1916. Semicircular flap was turned down in posterior part of left temporal region. Bony opening, three inches by two inches, made in skull wall. Upon incising dura, which was unusually thick, it was found adherent to the underlying meninges and cortex and when separating the latter from the overlying membranes I opened into a cyst situated in the cortex of the upper part of the temporal lobe, close to the horizontal limb of the fissure of Sylvius. About half an ounce of comparatively clear, thin fluid escaped from this cyst whose surface area was about as large as a quarter. I introduced a drain of rubber-dam into the cyst cavity and closed the rest of the scalp wound. The patient was returned to bed in good condition, but never regained con-

sciousness and died in six hours. We blamed the anesthetic for this man's death: he had been given a hypodermic of morphia Gr. 1-6, one-half hour before and a hypodermic of morphia Gr. 1-6 and scopalamin Gr. 1-100 one hour before, also an anesthetic enema consisting of comp. spirits of ether 2 ozs., whiskey 2 ozs., and water 4 ozs., prior to the administration of ether by inhalation—this constituting so-called narco-anesthesia.

Case 6. Seel, age 26 years. When three or four years old fell down steps and hit his head. His left eyebrow was cut open and he was unconscious, but doesn't know how long. When about 10 years of age, fell off a bridge and cut right eye and sprained right arm. Five years ago broke nose playing basket-ball.

About two years ago it was noticed that he did peculiar things. His head would buzz and he would get giddy. He soon commenced to take things from around home—jewelry, etc., would pawn it and stay until the money was all gone. At these times his head appeared to "go around," and he got very nervous. As soon as he had been home a day or so he would pick something up and go away again. He did not realize what he was doing until away from home; he watched everybody and was afraid of being caught. He ran an electric crane but became careless, letting it go while he did something else and had to give it up. The last six months he had a lot of headache with sharp pains in frontal region.

Physical examination: Scar above left eyebrow. Nose deviates to right. There is fulness, or bulging on left side above frontal sinus and over left temporal region.

X-ray shows a thickening of bone and dura in left frontal region and in left temporal region anteriorly.

Operation, January 5, 1917. Left squamous and parietal bones presented an uneven, irregular surface anteriorly. Cortical cyst containing 1-2 oz. of clear fluid was found adherent to ridge on deep surface of squamous portion of temporal bone low down and extending forward on to greater wing of sphenoid bone. Cyst was in anterior part of first temporal convolution. (We are finding something in these cases of kleptomania.)

MORAL IRRESPONSIBILITY.

Case 7. J. W. B., male, age 15 years. Was born at full term, no instruments, breech presentation; was a blue baby; excessive amount of hair over the whole body; was born with two teeth. No convulsions or other infantile illness. At age of three and one-half became troublesome and stole things which he hid. At age of four years had a fall from a building, receiving a laceration of the scalp on right side of head. Continually getting into all kinds of trouble; does not deny his acts; wants to stop them and is willing to do anything to stop them, but can't. Companions are of the worst kind; hunts them up; has gotten out of bed at night and has gone away from home for weeks or months; has been arrested as follows: In 1910, arrested for malicious mischief; May, 1911, for malicious mischief; September, 1911, breaking into store and larceny; December, 1913, for breaking into store and larceny and was then committed to Glen Mills Reformatory for six months. November, 1914, arrested for forcible entry and larceny; sent to the Philadelphia Hospital, psychopathic ward. December, 1914, reported from Philadelphia Hospital that boy is a moral imbecile and not a case for the psychopathic ward, Glen Mills recommended; was again committed to Glen Mills, where he was detained for months. Was again discharged and immediately entered a hardware store and stole six revolvers and ammunition. He knows that he is stealing and that it is wrong and what the consequences will be, but he cannot control the desire.

Physical examination: Pupils small, react to light and accommodation, no nystagmus, vision and hearing normal, slight atrophy of right side of face, hands and grips normal and equal, patella reflexes normal, no clonus or Babinski. Cerebration slow, mentality fair, memory good.

Report of X-ray examination: There is evidence of an old fracture on the right side of the head, about one inch above the roof of the orbit and two inches back of the external angular process of the frontal bone; the bone at the seat of fracture shows malformation and projection inward.

Operation, November, 1915. Trephined in right temporoparietal region where there was positive evidence of an old fracture of the skull, the posterior part of the squamous bone being deeply depressed along a line extending downward into

the temporal fossa. Very tight adhesion existed between the dura and the bone. I opened the dura, disclosing abnormally large veins in the pia, with marked injection of the cortex. I ligated several of these veins with very fine linen. After introducing a small piece of Van-Saw Tissue beneath the dural flap to prevent the formation of adhesions, I sutured the dural flap in place and closed the scalp wound without drainage. Post-operative recovery uneventful.

Following his operation the boy appeared bright and happy, read magazines and amused himself by drawing pictures with crayons. In January, 1916, he secured a position in the Midvale Steel Works, where he was paid $12.50 a week.

The later history of this case shows that the boy was permitted to associate with his old companions without let or hindrance. Moreover, the Juvenile Court, through the police authorities, watched and haunted him day and night. This is another instance of post-operative neglect, and emphasizes the necessity of good influence, moral surroundings and social training in cases which have been woefully deficient in these essentials for so many years previously. Here is a practical demonstration that "evil companions corrupt good manners," and also perpetuate evil habits. I am convinced that some benefit was obtained from the operation on this boy and that it should have been and would have been greater if his home surroundings had been more favorable. One satisfaction remains, that in this case as in all this series of cases, a positive, tangible lesion was demonstrated, and Gall's and Hollander's views on the mental functions of the brain were corroborated.

KLEPTOMANIA AND INCORRIGIBILITY.

Case 8. J. G., age 14, October, 1916. Normal mentally until two years ago. Is incorrigible, lies, steals, masturbates, is an incendiary. Forceps delivery. No history of fall or injury since. Now has linear depression at frontal eminence, right side, long axis transverse. No symptoms of mental deficiency or dementia. Is interested in the study of chemistry and wireless telegraphy.

Operation: Narcoanesthesia. U-shaped flap made with base at hair border, and reflected downward. Hudson trephine applied just above depression in frontal bone, which is very soft and spongy. Considerable bleeding from diploë,

controlled with Horsley's wax. Opening enlarged in all directions, especially downward and forward, including depressed area. Dura deeply injected; no adhesions. A dural flap was turned down exposing an intensely injected and edematous pia. Pulsations normal; no subdural adhesions. Inserted Van-Saw tissue beneath opening in dura and sutured dural flap into place with interrupted linen sutures. Scalp wound sutured by button-hole stitch of heavy linen. No drainage. Post-operative recovery normal.

His condition in April, 1917, as reported by his physician, follows: "He has quit stealing and lying, but he is pampered so much at home by his over-indulgent parents that his temper gets the best of him and he has become a menace to his family. I wish you would tell me of some trade school where we can send him."

Undoubtedly this boy should be sent to such a school and I recommended one to his physician. This is another example of the necessity of following up this kind of cases with appropriate after-treatment.

REPORT OF TWO CASES OF NYMPHOMANIA.

Case 9. Miss P. S., age 23. General neurological examination made by Dr. W. L. Hicks. Born at full term, no instruments used, ninth child, all other children normal. Walked at the usual age; teeth at the usual age. At the age of 4 years fell, striking back of head on stone step, the scar from which still shows. Went to school at the usual age, but was very disobedient and was expelled several times; progressed with the class, but was always bad. Had very abnormal temper, threatened to kill members of the family; easily became excited and would never apologize. At the age of 11 had frequent sexual intercourse; at the age of 13 had intercourse with five different men in one day. Has left home and stayed away for several days, usually leaving town and staying in some house of prostitution, where she has had intercourse with as many as ten men in one day and has had an orgasm with about half of them. She also stole money from members of her family, and paid men to spend the night with her. She has never had intercourse for money but has had several presents given her. She began to drink heavily and to smoke two years ago, and says she always has more sexual gratification when she has been drinking. Has been pregnant

twice. Has had general, severe headaches for several years, with tinnitus, vertigo and diplopia.

Physical examination: Pupils equal, normal in size, react well to light and accommodation, ocular muscles normal, lateral nystagmus present on fixation to the right, ptosis of both lids, worse on the right. Flattening of the left side of face; tongue O. K. Fine tremor of hands, patella reflexes exaggerated and equal. No clonus; muscular force good; grips, right 10, left 8. Is left-handed. Weber referred to right ear; scar in the upper right occiput about one inch long.

Operation, March, 1912. Under ether anesthesia and the patient in the prone position a semi-circular flap was outlined in the occipital region with its base directed downward. The bone over the right cerebellar hemisphere was removed, a flap of the dura turned back and a section of the entire thickness of the cerebellar cortex, one inch long and five-eighths of an inch wide, was removed. The dural opening was closed and the wound sutured without drainage. I next turned up another flap, including the scar in the upper right occipital region and found the bone underneath to be depressed. This depressed area was removed by trephine and rongeur forceps. The operation recovery was prompt and the wound healing was perfect.

The day after the operation, the first thing that the patient said to me was, "I want to go home to my mother. My sister wants to send me out in the country, but I want to go home to mother and live with her." Shortly before her operation she had threatened to kill her mother. Before leaving the hospital this patient declared that she had lost all sexual desire. Under date of October 3, 1912, eight months after her operation, her family physician writes: "The pleasure is mine in being able to report that Miss P. S. has had no relapse whatever. She is a totally different young woman, and her sister just told me that they are delighted with her conduct for the past eight months—they could not ask for anything better. She is now truthful, which could not be said of her before her operation."

Post-operative report on November 13, 1912, by Dr. Hicks. Has had no intercourse; has no sexual desire; mentality good; is physically well.

This patient called at my office in February, 1913, almost a year after her operation, and solemnly stated that she has

relinquished her old haunts and habits and has refused immoral offers from the opposite sex repeatedly since I operated upon her head.

In October, 1913, this patient's family physician reported to me as follows: "I regret to say that P. S. went back to her former habits after doing well for over a year succeeding your operation. She caused her people so much anxiety that she was committed to the State Asylum at Norristown, Pa., as a degenerate and feeble-minded. I saw her sister recently and she tells me that P—— is quite contented in the asylum, thinks it the finest place she was ever in, and does not manifest any symptoms of her old disease."

I am giving the latest report of the actual condition of these patients, and I feel that I am entitled to say that P. S. was permitted to live in the same environment, associate with her old companions and frequent her old haunts, moving picture places and saloons, after her operation as before it, although Dr. Hicks and I strongly urged the girl's relatives to remove her far away from her old surroundings. If this had been done, perhaps the success of the operation would have been even more signal and complete. At the Norristown Asylum, where I saw her recently, she is well behaved, happy, enjoys the freedom of the grounds, *and shows no symptoms of nymphomania.*

Case 10. M. L. P., age 44. Has complained all her life of spinal irritation for which she was treated by braces, wearing them for five consecutive years at one time. She feels that she has always been peculiar and different from other people and attributes this feeling to prolonged nursing of her father and mother. She says that she is degenerating into a "fool." When she was 10 years old, she and her cousin, who was then 18 years of age (male) practiced masturbation with each other and also alone. This was persisted in for many years, even after he had married. She had regular, natural, daily intercourse with her hired man for five years, even during her menstruation. She never became pregnant; her menses have always been regular. At the age of 31 was informed that what she was doing was not right and from that time on she had intercourse less regularly, but she and her cousin persisted in masturbation till five years ago. At present her sexual desire is driving her crazy. She has constant headache; has vertigo and some tinnitus; no diplopia. Her gen-

eral health is not good; her appetite is poor, bowels are regular, no nocturnal micturition; her digestion is poor.

Physical examination: Pupils equal, normal in size and react normally to light and accommodation; ocular muscles normal, no nystagmus; facial muscles normal, hands normal; patella reflexes normal, no clonus, no spasticity; static ataxia is present; she falls at times.

Operation, June, 1912. Under ether anesthesia the patient was placed in the prone position with the forehead upon a head-rest extending out from the operating table. I made a semicircular incision with its base directed downward so as to expose the occipital bone from the external protuberance to the foramen magnum. The floor of the cerebellar fossa was removed on both sides of the median line, exposing both cerebellar hemispheres. I next divided the dura and removed a section of the cerebellar cortex 1½ inches long and three-fourths of an inch wide and involving its entire thickness, from each hemisphere. The dura was then sutured and the wound closed without drainage. The operation recovery was uneventful and wound healing was perfect.

Post-operative examination made December 31, 1912, by Dr. Hicks. No return of the old sexual symptoms; has been getting much stouter and stronger; mental condition seems good; otherwise all physical symptoms the same as above; ataxia is still present, the same as before operation.

Krause (Surgery of the Brain, Vol. 1, p. 145) states: "Extirpation of tumors of the cerebellum may be accomplished together with sacrifice of considerable cerebellar tissue. The technique is readily performed even though only one-half of the cerebellum is exposed. If carefully executed one-third and even one-half of the cerebellar hemisphere may be removed without, in my experience, grave consequences. I have not met with important bleeding."

Hollander, in his fascinating work, "The Mental Functions of the Brain," frequently refers to Francis Joseph Gall, the celebrated German neurologist, who lived in the latter part of the eighteenth and the early part of the nineteenth century. Gall was called "the founder of the physiology of the brain," and is lauded and eulogized by Hollander and others for his remarkable discoveries of facts connected with the anatomy and physiology of the central nervous system. It is in the hemispheres of the cerebellum that Gall located the sexual de-

sire. Gall did not assert that every vital function in propagation depends immediately upon the cerebellum, but that the feeling that prompts to the act is organically dependent upon this structure. There are three functions involved in this process (I am quoting from Hollander)—sentient or feeling, reflex, and secernent or secreting. The first, which involves consciousness, must have an encephalic organ; this, according to Gall, is the cerebellum. The next—the reflex—must take place through the agency of the appropriate segment of the spinal cord (lumbar region). And the last occurs through the sexual organs.

The cerebellum, both in man and in animals, is relatively very small at the time of birth, and it reaches its full size only in the adult. In an infant the mastoid processes approach toward each other, and there is no occipital swelling. Later the occipital fossae become deeper and more convex, widening the distance between the two mastoid processes. Before puberty the distance between them is less than the distance between the two parietal eminences; in the adult the two distances are very nearly the same.

Apollonius of Rhodes, speaking of the passionate love of Media, says: "The fire which devours her attacks all her nerves, and makes itself felt behind the head in that spot where pain is most poignant when an extreme fervor seizes all the senses." In olden times artists depicted broad necks for sensual people.

Gall, of course, had many opportunities to see cases of satyriasis and nymphomania. He criticised the physicians of his own time who sought to locate the morbid manifestations of this instinct exclusively in the sexual organs and who castrated such persons. He argued that this condition is due to a cerebellar lesion, and is not of a local character.

Hollander states that his book on "The Mental Functions of the Brain" "is not a textbook on phrenology." He says, "it is one thing to read an average head, which implies merely average characteristics which may fit anybody, for the amusement of the individual and the pecuniary profit of the manipulator, the professional phrenologist; but it is quite a different matter to search out the causes wherefore some particular person proves a failure in life, or has developed tendencies which may land him in prison or in an asylum." This author ventures, after fifteen years of accumulated experience and re-

search, to formulate, as highly probable, the following functions for the several lobes of the brain:

1. That the prefrontal lobes are concerned in the purely intellectual operations.

2. That the temporo-sphenoidal lobes are in some way connected with the propensities common to man and the lower animals.

3. That the parietal lobes and the posterior part of the frontal lobes are involved in the manifestations of definite emotions.

4. That the occipital lobes bear a relation to the domestic and social affections.

Hollander has attempted to localize some of the mental faculties, demonstrable from their morbid manifestations to be connected with definite lesions in the brain, as:

Morbid fear and melancholia with the supramarginal and angular gyri of the parietal lobes.

Kleptomania and voracious hunger and abnormal thirst with the anterior part of the temporal lobes.

Irascibility and violent mania with the central part of the temporal lobes.

Mania and suspicion and persecution with the posterior part of the temporal lobes.

The tender domestic and social affections with the occipital lobes.

Perception of tone (music) and of number, with some part of the brain abutting on the fissure of Sylvius.

Perception of form, size, place, color, memory of time, facts and events, etc., with the supraorbital gyri and adjoining parts of the frontal convolutions.

Imagination and co-ordinated processes, with the anterior superior parts of the frontal lobes.

Religious mania and perversion of altruistic sentiments with the postero-superior part of the frontal lobes.

Satyriasis and nymphomania with the hemispheres of the cerebellum.

Hollander's observations "should enable the physician or surgeon, when he meets with cases in which the chief, or perhaps the only symptoms are psychical, and not physical, to localize the seat of the disease and to apply treatment accordingly."

It is with Hollander's rules and advice to guide me that

I have ventured into this special field of cranial surgery. I offer no apology for the paucity of my cases, or for the comparatively short time since their surgical treatment.

This is an exclusive and exceptional work, and on this account and also because of its altruistic features, it is most fascinating.

THE CLINICAL IMPORTANCE OF FECAL EXAMINATION IN PEDIATRIC PRACTICE.

BY

C. S. RAUE, M.D., PHILADELPHIA, PA.

Professor of Paediatrics in the Hahnemann Medical College of Philadelphia.

Read before the Clinico-Pathological Society of Philadelphia, February 6, 1919.

THE systematic inspection and chemical examination of the feces of an infant artificially fed, is, to my mind, absolutely essential.

The data obtained by this clinical procedure not only tell us whether the food is suitable for the infant but also warn us of approaching danger and make it possible to avoid digestive and nutritional derangements as well as metabolic disturbances.

The correction of such common derangements as diarrhoea and constipation lies primarily in a rational understanding of intestinal digestion as shown by the appearance, chemical reaction and composition of the feces.

Again, serious metabolic disturbances may result from a prolonged use of a diet unsuitable for the infant, the first indications of which may be demonstrated in the stools.

For this reason I wish to call your attention to a routine procedure of stool examinations which I employ in my practice and I hope to be able to convince you that these clinical methods are in no way more difficult, complicated or objectionable than are urinary examinations. To the pediatrist they are certainly as important and invaluable as urinalysis is to the internist.

THE STOOLS.—The new-born infant discharges a dark, greenish, tarry substance of semi-solid consistency from the bowels which is called *meconium*. Its composition is biliary

and intestinal secretion from which most of the moisture has been absorbed and which has accumulated in the gut during foetal life. There is also present epithelium, hairs, and vernix caseosa, showing that the foetus swallows amniotic fluid. On the third day the discharges from the bowel become thinner and contain more mucus and assume a brownish-green color. This is identical in appearance and composition with the *starvation stool* observed when a child is fed for several days on a diet containing no solid constituents such as barley-water, broth or tea.

Factors Influencing the Character of the Stools.—The diet is largely responsible for the appearance and character of the stool. The condition of the digestive organs also influences the character of the stool and we must, therefore, differentiate between physiological and pathological deviations from the average normal. A young infant may have from three to four stools daily, while an older one will normally have from one to two in 24 hours.

The *frequency* of the stool is greater in breast-fed than in bottle-fed infants and the consistency may be decidedly thinner without there being the slightest indication of a nutritional disturbance. A thin stool containing some mucus may simply indicate that the milk is poor in fat. The *consistency* of the stool is therefore largely dependent upon the amount of fat present in the food. When the infant is fed upon a food containing fairly large amounts of protein and carbohydrate but a low percentage of fat, the stools are usually soft and salve-like. When the food is rich in fat and low in protein the stool may be soft or semi-liquid and contain curds. In cases of over feeding with both casein and cream the stools become large and formed, of putty-like consistency and grayish color, due to the formation of soaps in the intestinal tract. The soaps produced by the union of fatty acids with the calcium salts of the intestinal secretion, are dry and insoluble and therefore produce troublesome constipation.

The color of the breast-fed stool is an orange-yellow, due to the presence of unchanged bilirubin. In infants fed on cow's milk the stools are of a paler shade. Sometimes they become almost colorless, as a result of the reduction of bilirubin into hydrobilirubin or urobilinogen, through bacterial action. This is most frequently seen in fat indigestion with constipated stools. When high protein and low fat formulae

are fed, the stool may have a brownish-yellow color. Barley and maltose preparations give the stool a brownish color. In dyspeptic conditions resulting from fermentation of the sugar of milk in the food, the stool is usually green in color.

The *reaction* of the stool may be determined with strips of red and blue litmus paper moistened with water. It is acid in the breast-fed infant as a result of the fermentation changes taking place in the intestinal canal. This is favored by the high sugar (lactose) and low protein content of the mother's milk. In bottle-fed infants the stools are alkaline as a result of putrefactive changes in the intestine. The reaction may be made acid by feeding high fat and low protein formulae or by increasing the percentage of sugar in the food. There is, however, always danger of the fermentation process exceeding the normal bounds and it is well to reduce either fat or sugar, as the case may be, so soon as the stool becomes acid in reaction.

In the lower portion of the small intestine and in the caecum of the breast-fed infant the bacillus lactis aerogenes and the bacillus bifidus predominate. The latter is most prevalent in the colon. Both are saccharolytic, converting lactose into lactic acid. The bacillus bifidus is Gram positive in its behavior to stains.

In the artificially fed infant the colon group of bacteria predominate. They are proteolytic although in a medium consisting chiefly of carbohydrate they may set up fermentative changes. The colon bacillus is Gram negative.

Aside from the higher protein percentage of cow's milk the putrefactive changes which take place in the albuminous intestinal secretion are also responsible for the bacteriological difference between the intestinal tract of breast-fed and artificially fed infants. The protein rich artificial food stimulates intestinal secretion to a greater degree than does woman's milk. The alkalinity of the secretion favors putrefaction as does also the relatively higher calcium content of cow's milk. Several factors, therefore, are operative in bringing about these proteolytic changes.

Abnormal Constituents in the Stool.—*Curds* are one of the most important abnormal constituents of the stool and are usually associated with an excess of moisture and mucus, so that the stool becomes too soft or liquid. Such a *loose* stool is typical of indigestion, although in breast-fed

infants several such stools may be passed daily and still the babe thrive.

The majority of curds indicate fat indigestion. They are composed of neutral fats and calcium soap, resulting from the combination of the fatty acids of the food with the mineral bases present in the intestinal secretion. Fat curds are small and soft and impart an oily stain to a piece of unglazed paper when crushed on the same if they contain an appreciable amount of neutral fat. When they are composed mainly of calcium soap they are drier and more brittle. They always contain some adventitious protein matter which may give them a tough consistency. The large, dry, hard fecal masses encountered in constipation from over-feeding are good examples of calcium soap stools.

Casein, or protein curds are far less common than fat curds. They only occur when unboiled cow's milk is used and so can readily be corrected by boiling the milk. Casein curds are tougher than fat curds and are hardened by the action of *formaldehyde*. They are usually seen as large bean-shaped bodies found embedded in a stool which may be otherwise normal in color and consistency.

Chemical Examination of the Curds.—A protein curd will respond to the usual test for protein, such as, the Xanthroproteic reaction and Piotrowski's reaction. It should be remembered, however, that a considerable portion of the make-up of curds and other elements in the stool must be attributed to the albuminous intestinal secretions and bacteria, and for this reason all curds, whether primarily resulting from undigested or unassimilated fat or casein, will be contaminated with extraneous protein.

A washed portion of the curd is placed in a test tube, dilute nitric acid is added and the contents of the tube boiled. All proteins are dissolved by the action of such a hot acid solution. The solution assumes a yellow color. When the solution has cooled, a strong alkali, such as sodium hydroxid solution, is then added and an orange-yellow color reaction takes place. This is the *Xanthoproteic reaction*. *Piotrowski's reaction* is obtained by adding to the above solution a drop of copper sulphate and then an excess of sodium hydroxid. The reaction is a violet color, becoming darker on boiling.

Fat curds are not influenced by formaldehyde but they are melted by heat if acetic acid be added to break down the

soaps and liberate the fatty acids. The latter will crystalize out on cooling. The various fat elements also present certain staining peculiarities which makes their identification possible. The test is best carried out under the low power of the microscope. A small fragment of the stool is placed on a glass slide, mixed with a drop of water and then a drop of *dilute fuchsin* stain is added and a cover-glass applied. The soap particles present take on a pale rose, while the fatty acids take on a deep red stain.

Neutral fats do not take the fuchsin stain but can be demonstrated by treating a specimen prepared as above with the alcoholic Sudan III. With this stain the neutral fats show as orange colored droplets. The fatty acids take on a deep red.

If a drop of glacial acetic acid be allowed to run under the edge of the cover-glass and the specimen heated, the fatty acids are liberated and on cooling will show under the microscope as needle-like crystals.

This test is of value to establish the identity of a given curd and it also gives an approximate idea of the amount of fat in the stool. In normal, well digested stools only traces of soap and fatty acids will be found. The younger the infant, however, the less complete the assimilation of fat, even under normal conditions. The presence of neutral fats indicates duodenal indigestion from excessive peristalsis or sugar dyspepsia, or it may be a sign of fat over feeding. Excess of soaps in the stool indicate chronic fat indigestion, usually as a result of over-feeding.

Bile is present normally in the breast-fed stool, in the form of *bilirubin* which gives the stool its bright yellow color. Under artificial feeding the biliary constituents are often changed. In constipated stools bacterial reduction takes place and most of the bilirubin has been changed to uribilinogen, so that the stools are much lighter in color. In fermentation disturbances the bilirubin has been oxidized to biliverdin, giving the stool a green color.

When exposed to the air a loose stool which was yellow when passed, oxidizes to a green color.

In order to demonstrate the presence or absence of biliary salts in a white or gray stool, the following test may be applied:

A small portion of the stool is triturated in a mortar with a little water until it has been liquefied. Ten or fifteen

drops of a saturated aqueous solution of bichloride of mercury are added, mixed, and the specimen allowed to stand for twelve hours or longer. Urobilin gives a red reaction. If bilirubin is also present, specks of green will also be seen.

Occult Blood.—The test for occult blood is of value in the diagnosis of melena neonatorium. It is performed as follows:

A small portion of the feces is liquefied with water, put into a test tube and an equal amount of ether added. The tube is agitated without shaking, the ether is then allowed to rise to the top of the mixture and is poured off. The fat in the stool is gotten rid of in this manner. Glacial acetic acid is now added to the amount of about one-third the quantity of liquid in the test tube; the mixture is shaken and then an equal quantity of ether is added for the purpose of extracting the acid hematin. The ether extract is permitted to separate and is then decanted into another test tube. The benzidin test is added to the ether extract and if blood was present in the stool, a blue color reaction takes place. The benzidin test consists of equal parts of a saturated solution of benzidin in glacial acid and hydrogen peroxide.

Bacteriologic Examination.—It has been already stated that the breast-fed stool is Gram positive, while the stool of the bottle baby is chiefly Gram negative. In the latter the colon bacillus predominates and this organism may act either as a fermentative or as a proteolytic agent. Kendall has shown that when a sufficient amount of carbohydrate is added to the diet the putrefactive changes in the intestinal tract may be inhibited and fermentation changes take their place. Kendall has also shown that the association symbiosis of the *bacillus subtilus* with the *colon bacillus* may lead to pronounced proteolytic changes with the formation of gas and this may take place in the small intestine.

Among the pathogenic organisms demonstrable in the intestinal tract the most important are the *dysentery bacilli*, of which there are several types. These organisms may be at times demonstrated in the stool of healthy infants but when they are found in a case of ileocolitis and given the agglutination reaction with the blood of the patient, they may properly be considered as infective agents. Unfortunately the cultivation and the identification of the dysentery group requires special laboratory facilities and technical skill, and therefore

cannot be carried out in ordinary office practice. The dysentery bacillus can frequently be seen in the stools of dysenteric cases as a Gram negative, intracellular bacillus.

The *gas bacillus* of Welch, is looked upon by Kendall as the etiological factor in certain cases of infantile diarrhoea and the interesting point in connection with this type of infection is that he considers the *lactic acid bacillus,* given either in culture or in the form of buttermilk, as therapeutically specific. Holt considers its presence in diarrhoeal cases as purely accidental. Its identification is simple and therefore clinically practical. A small portion of the suspected stool is thoroughly mixed with several cubic centimetres of milk in a test tube, the tube is placed in a water bath of cold water, the water slowly brought to the boiling point and allowed to boil for three minutes. All bacteria are killed by this heat excepting the spores of the gas bacillus. After incubating the tube at body temperature for twenty-four hours the gas bacillus, if present, liquefies the major portion of the casein and the residue assumes a pinkish color and contains small gas bubbles. The odor of butyric acid is also evolved. The bacillus is a thick short rod with rounded ends, and is Gram positive.

In older children abnormalities of intestinal digestion can be demonstrated by placing a child on a test diet for 24 hours and then examining the stool for undigested fat, protein and starch. Meat, fat and raw starch must be included in such a diet. My plan is to prescribe the following diet, after using a gentle laxative the night before in order to insure a thorough evacuation of the bowels before beginning the test. The stool is obtained the next morning after the test meal, using a suppository if necessary.

Breakfast: A cooked cereal with sugar and one ounce of cream; half of a banana; a cup of warm milk.

Dinner: One lamb chop; baked potato; a well cooked green vegetable; bread and butter; stewed fruit: teaspoonful of olive oil.

Supper: Milk toast; soft boiled egg; cup of cocoa; bread and butter.

Neutral fat in the stool, will indicate pancreatic and biliary insufficiency. Fatty acids will indicate faulty assimilation. Undigested meat fibres indicate pancreatic insufficiency. Starch granules may be present in the absence of meat fibres,

showing intolerance to starch. Acid reaction indicates carbohydrate fermentation.

The above data can be obtained by placing a small portion of the stool upon a glass slide, making two separate specimens. A drop of Gram's Iodine solution is added to the first specimen. This will show meat fibres, vegetable matter, starch granules if present stained blue, and parasites.

The second specimen is stained with Sudan to demonstrate neutral fat; acetic acid is then added according to the procedure employed in the examination of infant's stools to demonstrate the presence of fatty acids.

The examination of the feces in certain metabolic disturbances, such as cyclic vomiting, chronic eczema and intestinal infantilism, is valuable both from the standpoint of diagnosis and treatment. A normal child will digest and assimilate the test meals perfectly, while in the conditions named we frequently find undigested starch, unassimilated fat and sometimes undigested meat fibres.

SOME POINTS IN DISEASES OF THE EAR, NOSE AND THROAT, FOR THE GENERAL PRACTITIONER.

BY

G. J. ALEXANDER, M.D., PHILADELPHIA.

Read before the Homœopathic Medical Society of the State of Pennsylvania.

RECENTLY in a conversation with two colleagues and friends practicing general medicine, on the subject of failure of so many general practitioners to attend the meetings of this society, the following opinions were ventured by them.

The first speaker claimed that the meetings are for and dominated by the specialists, their papers usually being a disappointment, inasmuch as they contain very little of value for use by the general practitioner. "Yes," said the second speaker, "that is true; besides, five out of every seven papers I hear, I can go right to the text books and read them just as I had heard them read from the papers."

Apropos of this conversation I will group together a number of practical points relating to the ear, nose and throat, that can be used to advantage by the general practitioner: but

hope that in so doing I will be able to camouflage them in such a way as not to arouse his suspicion of their being text book quotations, which, of course, they are not.

There seems to be considerable confusion in placing the proper importance or meaning of pain and tenderness as referred to by patients at different points around the ear in inflammatory conditions of the middle ear and external auditory canal, for instance. Pain and tenderness at the tip of the mastoid process associated with an acute otitis media is frequently mistaken for an involvement of the mastoid (mastoiditis). A careful examination will locate the pain and tenderness in front of the tip of the mastoid process and is due to inflammation of muscle structure and the infra-auricular gland which drains the middle ear. In an acute inflammation of the external auditory canal, pain and tenderness are often referred to behind the ear in the mastoid region. An accurate examination will show that it is close to the posterior wall of the external canal, due to inflammation of the posterior auricular gland, and not a mastoiditis, for which it is so frequently mistaken.

Pain and tenderness directly in front of the external auditory canal on the tragus is pathognomonic of a furuncle in the external canal, which is always in the outer or cartilaginous portion of the canal and can be definitely located by making point pressure in the canal.

Pain and tenderness of a mastoiditis may be located at any point of, or over the whole mastoid region, though neither is absolutely essential to a mastoiditis.

When you see swelling over the mastoid region, with pus in the external canal, or bulging of the drum membrane without perforation or visible pus, do not wait for greater swelling or more symptoms; you are already later than you should be in applying for surgical intervention. Grave and long drawn out complications are probably becoming thoroughly established during such delay.

If a patient complains of an annoying itching and full feeling in the ear, often combined with dullness of hearing, look for eczema of the external canal.

Cerumen should be removed whenever possible with a metal syringe and warm water, rather than by instrumentation, first questioning the patient in an endeavor to exclude an existing perforation of the drum membrane.

Do not treat your cases of impacted cerumen in children with indifference; it may be combined with dried pus behind which is a chronic suppurative otitis media of which there is no history and that has for a long time been the obscure cause of the child's loss of weight and poor health. In such a case removal of the cerumen and debris, continued local cleansing with dry cotton tampons or peroxide, inflation and some general treatment, will soon produce a noticeable improvement locally and in the patient's general health.

An exostosis in the external canal may be mistaken for cerumen when it is covered by, and the cavity between it and the drum membrane is filled with, cerumen. The removal of the cerumen in such a case is often exceedingly tedious and can only be accomplished by the combined use of the syringe, instruments, liquid petroleum, etc.

Foreign bodies in the external auditory canal usually require the use of instruments for their removal; hence great care must be exerted here not to injure the canal walls. I have seen extensive traumatism of the canal from inexperience and carelessness in the use of instruments for the removal of foreign bodies and cerumen.

It seems strange, but there still remains a great number of physicians who use and advise the indiscriminate use of the syringe with warm water solutions to control an earache or cleanse the external auditory canal when there is present an acute serous or suppurative otitis media; they persist as well in dropping oils, laudanum, etc., into the ears. This practice is not only unscientific but it is dangerous, and frequently results in complications.

Never use narcotics as morphia internally, or cocain or other strong analgesics locally to allay pain in the ear. This masks the symptoms and extent of the primary conditions and allows important complications—mastoiditis, for example—to be well advanced before they can be recognized. The indicated remedy internally, heat or cold over the ear, phenol and glycerine 5 per cent., or Burrows' fluid on gauze in the external canal, will usually give the patient relief and at the same time permit the physician properly to observe the course of the inflammatory process.

Any redness of the drum membrane means an inflammation of the middle ear, however mild, if the external meatus is normal in appearance and a myringitis can be excluded.

Cessation of the discharge from a running ear of the chronic type is frequently the result of dried exudate blocking up the small outlet, is only temporary and does not mean that the condition has subsided, a mistaken idea that is so often entertained.

The cause of oncoming defective hearing, conductive in character, has its origin more frequently in the nose and throat than is generally suspected, due to catarrhal conditions, intra-nasal obstructions, as a deviated septum, septal spurs, hyperplasia of the turbinates, polyps, etc. Others are adenoids, acute or chronic pharyngitis and chronically diseased tonsils.

Subjective noises, or tinnitus, is for the most part the result of a catarrhal affection and thickening of the walls of the eustachian tube and of the middle ear.

A distinguishing feature in vertigo of the aural type is the associated nystagmus or oscillation of the eyes usually in a horizontal direction.

You can only make a thorough examination of the nose by first carefully shrinking the parts inside with preferably a 20 per cent. solution of cocain. Two distinct advantages of cocain over adrenalin for this purpose are: first, the cocain anaesthetizes the part, and, secondly, one has not to deal with the hyperaemia of the mucous membrane that frequently follows the use of adrenalin, which in a number of instances is difficult to overcome.

Don't think you can cure a catarrhal condition of the nose or throat that is caused by such obstructions and deformities as a deviated septum, septal spurs, hyperplasia of the turbinates, polyps, etc., by means of conservative or local treatment, because you can't. Why? Because wherever there is contact of the parts in the nose, it acts as an irritant, that can only be relieved by mechanical adjustment, essentially surgical; to straighten the septum, remove spurs, hyperplasias, etc., incidentally obstruction to breathing, contact of the parts and finally the restoration of function and removal of the pre-existing catarrhal condition.

Do not deprive your young patients of about the age of six years and upwards of intra-nasal surgical aid. I have seen many pale, anaemic, undersized and nervous children build up and straighten out from this treatment with such

rapidity and permanency that it took the form of an actual transformation.

While intra-nasal surgery is all important to the adult, it is even more so to the child because it is then that these obstructions are in the developmental or at least the early stage of their presence, and because the general physical and mental development of this type of patient is or should be at its height. The work on children is done principally under a general anesthetic, while with the adult local anesthesia is preferable and almost always employed.

Cauterizing hyperplasias, etc., of the various parts in the nose by strong caustics and the electric point is little practised and is generally to be condemned because of the extensive injury and the resulting scar.

Anosmia or the loss of the sense of smell is most frequently due to intra-nasal deformities, blocking off the olfactory space or causing the tissues in this region to become boggy, thickened and devitalized.

The constantly inflamed mucous membrane in the nose resulting from pressure or contact of the parts is important in many patients who are susceptible or have a tendency to hay fever. This susceptibility and future attacks are greatly ameliorated and in many instances entirely overcome by surgical intervention, removing the above conditions.

Mouth breathing is commonly the result of intra-nasal obstructions though it is nearly all credited to adenoids by the general practitioner.

The most noted result of the use of the nasal douche is middle ear trouble.

Sometimes it is only possible to remove a foreign body in the nose through the pharynx; for instance, an open safety-pin or a hairpin that is used by the patient to clean out the nose.

Epistaxis is invariably the result of an erosion of the mucous membrane and breaking of a small vessel on the anterior part of the septum. Its control by cauterizing with pure silver nitrate in inexperienced hands is often attended with bad results, hence the safer and better method is to pack the nose on the bleeding side with a strip of plain gauze anteriorly and not the entire cavity, as is generally practised.

Pain or tenderness, or both, in the frontal and intra-orbital regions associated with an acute rhinitis indicates in-

volvement of certain of the accessory sinuses. If there is an empyema of one or more of the sinuses, it can be recognized by streaks of pus coming from over or under the middle turbinate, while the secretion of a purulent rhinitis can be differentiated by its general diffused distribution over the surface of all the parts in the nose.

Adenoids are considered to be the remains or a portion of the pituitary body left behind in its ascent to the fossa of the same name on the base of the skull.

To be able to properly diagnose the presence or absence of adenoids, the examiner should be able to use four methods: namely, (a) observation through the nose, (b) by applying a blunt probe to the posterior wall of the pharynx through the nose, (c) the pharyngeal mirror, and (d) the digital method. The latter is to be discouraged because it is rough, painful, and frightens the patient. Frequently, too, only one can be applied and must be depended upon.

If you have made a diagnosis of adenoids as the cause of mouth breathing or obstruction to nasal breathing in your young patients, don't forget that your examination is not complete without knowing whether or not the nose is free from conditions previously called to your attention.

The effect of adenoids upon the child's mental condition is in some instances startling, particularly those cases with complete loss of memory. The immediate and absolute restoration of the memory that follows their removal is spectacular. This applies to adults as well and to the class of cases suffering from a devitalization of the general nervous system.

Adenoids are responsible for a vast majority of the middle ear trouble in children and in many adults.

The face of many an otherwise fine looking child or adult is disfigured by a contracted palatine arch, irregular and protruding teeth, just because the adenoids were not removed at an early age as they should have been.

What is the desirable early age at which adenoids should be removed? They should be removed as soon as the distress signal appears; in other words, about the age of three months or less, if necessary; but before this time there is usually little evidence of their presence, although I have removed them in one instance from a child two and one-half months old, the result being so absolutely undeniable that it was a joy to

observe. When present, adenoids should also be removed up to and beyond middle age, or even in old age, when causing symptoms of distress.

Do not presume to give an opinion as to whether a tonsil is in a healthy or diseased state, especially the submerged type, if in making the examination you failed to retract the anterior pillar and make pressure on the tonsil.

In any case where a white viscid or a caseous exudate can be expressed from the crypts of a tonsil, it means a diseased condition of the glands and crypts of the tonsil, and tonsilectomy is indicated.

Don't forget that the small submerged, hidden, normal appearing and harmless looking tonsils are the ones most frequently diseased.

The large hypertrophied tonsil is always a diseased one, from the fact that hypertrophy is a pathological state, by a thickening and increase of all the tissues of the parenchyma. It may appear normal to you. It is not; remove it.

Do not be deceived by the history of a patient having had but one or two attacks of tonsilitis, widely separated, and the last one a number of years ago, as these are among the ones commonly found to be in a chronically diseased state.

The presence of the diseased tonsil of which the patient has no knowledge is one of the most dangerous, because it remains undiscovered until long after it has exerted its harmful influence upon the patient.

Careful exclusion should be made of the tonsils in cases of muscular and articular rheumatism.

Tonsils are more frequently the seat of focal infection than all other parts of the body combined.

In your quinsy cases first be sure of the location of the abscess, if it is in or under the tonsil or is peritonsilar; then on the third or fourth day make a free, deep incision and keep it open for several days.

Occasionally the proverbial fish bone which so constantly lodges in the throat on Friday, is a fish bone and not the onset of tonsilitis or pharyngitis, as is so commonly the case. Be on the alert for the bone and avoid such embarrassment as was mine some time ago when a patient presented herself at my office on a Friday, with the typical fish bone history and symptoms. I could only see a pharyngitis, but her local physician, who is a clever man, found the bone. The points of

election for the lodgment of this foreign body are in the tonsil, posterior faucial pillar and alongside the base of the tongue behind the base of the posterior faucial pillar.

One of the most important factors pertaining to the presence of an acute or a mild chronic tonsilitis and pharyngitis is the involvement of the eustachian tube and middle ear cavity, manifested by tinnitus, dullness of hearing, full feeling and intermittent flash-like pain in the ear. These tend to become permanent if the cause is not eliminated.

I am sorry to relate that the antiquated idea and false theory of allowing diseased tonsils and adenoids to remove themselves spontaneously by shrinking still has its advocates among the profession. This is a slow process when it occurs, which is seldom, covering a period of many years, giving the diseased organ all the time it needs to exert its injurious influence upon the victim while he is waiting for nature to come to his rescue.

The reasons for removing diseased tonsils are numerous, and while all are important, those of most consequence are to eliminate involvement by contiguity of the pharynx, larynx, ears and nose, auto-intoxication and focal infection in distant parts of the body.

When and at what age should tonsils be removed? This is a question that seems to perplex the general practitioner most. The answer is, whenever they are diseased or in such condition as to be a detriment to the patient. It can be and is done successfully from about one to fifty years, or almost any time in old age when necessary and the vigor of the patient will permit. Personally, I have removed them in infants slightly under one year with entire satisfaction.

In conclusion, please allow me to emphasize in a friendly spirit the invariable presence of the ever astonishing lax, indifferent and incapable treatment to which so many of these ear, nose and throat patients are subjected by many of the general practitioners, especially in the more important and serious conditions as acute inflammations of the ear, etc., until the patients in despair are obliged to seek further in their blind and inexperienced way for relief, with the attending feeling of displeasure toward their physician, while if their conditions were disposed of in the proper way, the family physician would be, and is the one, and rightly, too, to whom the credit and appreciation go.

DISCUSSION.

Dr. William Clark: I think that Dr. Alexander's advice in regard to dropping things into the ears is very valuable. I should, however, like to state that in cases of earache, the use of a few drops of plantago major in warm water will give the child almost immediate relief. I have seen this many times.

Regarding the use of cocaine, it is very rarely indicated for children. I would like to change the suggestion that it frequently causes anemia by saying that I believe that it is always anemia. That is one of the secrets of its action. It drives the blood out of the parts, and the nerve is not nourished. The pain is then relieved. I have also noticed that relief is afforded only once. It is almost always inefficacious if used a second time.

Dr. Roy C. Cooper, Pittsburgh, Pa.: I should like to ask in how young a person Dr. Alexander would advise resection of the nasal septum, and what effect it would have on the subsequent development and growth of the nose in patients under ten years of age?

Dr. J. W. Stitzel, Hollidaysburg, Pa.: While we all know that plantago major has a good effect internally, I doubt whether dropping it, mixed with warm water into the ear would have much effect. Anyone who has tried to make an incision of the membranum tympani, even under the use of pure crystals of cocaine, will know how little effect is produced by the anesthetic. If the use of these crystals will not anesthetize the ear-drum, I doubt whether you would get any effect from plantago major.

Dr. Roland T. White, Pittsburgh, Pa.: For several years, I have taken a five-dram vial and put five to eight drops of carbolic acid into two drachmes of olive oil, or into a lesser amount in glycerine. This will stop almost any earache.

Dr. William Clark: I wish it could be understood that plantago acts as a remedy. The heat is nothing. The natives, we are told, chew the leaves of the plant to relieve toothache. The fifth nerve supplies the ear and the teeth. Plantago will often stop severe toothache, and I think that it acts homœopathically by virtue of its medicinal power.

Dr. Arthur F. Huston, Pittsburgh, Pa.: In such cases, I have always resorted to the internal homœopathic remedy in potentized form. I have never used local remedies and have always been successful in relieving the patient, and also in producing absorption of the pus. That was particularly

noted in a case in my own home. My little girl was sick with mastoiditis. Pus had formed; and by the use of a prescription the pus was absorbed.

Dr. J. W. Stitzel, Hollidaysburg, Pa.: I wish simply to say this in defense of what I said before: No one here will doubt that plantago will relieve toothache. It may relieve earache; but I am here to say that you can put it in my ear for the rest of my lifetime, and get no effect. Anyone who has had experience with the ear knows how little absorptive power the drum has.

Dr. George W. Mackenzie, Philadelphia, Pa.: I think that the main points that Dr. Alexander wanted to bring out have not yet sunk in, and that it will do you good to read his paper over carefully when it is printed. His object was to bring out some thoughts from the specialist's standpoint that general men have overlooked, thus letting the case get into a bad channel, when it could have been prevented. He mentioned that ears should not be washed out indiscriminately. What he wanted to do was to impart the fact that this may result in a great deal of harm. For instance, if a patient has had a dry suppuration at some past time, which has healed with a perforation, and then gets impacted cerumen, for anyone to wash that ear, which is reeking in bacteria, in order to get rid of the cerumen, will result in washing the bacteria into the uninfected cavity, and will very promptly set up a serious suppuration of the middle ear, followed by a mastoiditis. It is points of that kind which Dr. Alexander, after considerable experience in having seen accidents happen from lack of knowledge of these points, is trying to impress upon you.

Dr. Alexander (closing): I suppose, from the remarks of Dr. Clark, that the point I wanted to make did not go in. That is the danger connected with putting narcotics into an acutely inflamed ear, thus masking the complications that may arise and become developed, before the effect of the drug has worn off, to a point where they cannot be controlled along conservative lines, but will require surgical treatment and perhaps lead to death.

With reference to Dr. Cooper's question, I would say that I do not know whether there is any man or men doing submucous resections on children as young as six years, other than myself. The thought was suggested to me by the fact that so many patients were sent in by doctors with instructions that adenoids be removed to overcome nasal obstruction. The climax was reached once when they sent a case back to have adenoids removed, when I had done this myself some

time previously. I then began to operate on these cases, and I could relate a number of interesting facts in that connection; but I want to say that all the results of adenoids are doubled when these two conditions exist together. I have had no time, as yet, to observe whether resection of the nasal septum has any influence on the proper development of the nose; but I do not believe that it has. Before I commenced this procedure, I was much frightened about that particular point, and consulted Dr. Mackenzie regarding the matter; and it was on his saying that he did not feel that future development would be influenced, that I went on with the work. Some of the patients have been operated on four years, and the nose is growing right along with the rest of the patient's body.

Dr. White's method of using carbolic is mine, only I call it phenol; but the trick is to put it on gauze, and not drop it in loosely.

I would not take, on one of my children, the chance that Dr. Huston took on his child, for anything on earth—depending on the absorption of pus in an empyema of the mastoid bone. If he were in a position to see some of the results of these subsided mastoid cases in the way of recurrences, he would be somewhat surprised; and he would also be surprised if he were to see some of the results that occur from waiting for the action of the internal remedy.

X-Rays in the Diagnosis of Urinary Calculi.—C. R. Treble (*Canada Lancet*) points out that sometimes, even with the most approved technique, the x-rays fail to detect calculi in the urinary tract. This may be attributed to any one of the four following causes:

(1) The consistency of the stone is soft.
(2) There is a large amount of abdominal tissue present.
(3) The location of the stone, in the lower ureter particularly, causes confusion.
(4) The radiographic technique is imperfect.

In making the examination one should include the eleventh and twelfth ribs; the lumbar vertebræ, expecially their transverse processes; and the pelvis. Some of the extra urinary bodies that may be mistaken for urinary calculi are: phleboliths and pelvic blotches, calcareous glands, tubercular glands in the mesentary, calcified plates in the arterial wall, calcified portions of the costal cartilage, foreign bodies in the alimentary canal, biliary calculi, prostatic calculi, calcareous cyst of the kidney, papilloma of the skin in the lumbar region, appendicular concretions and enteroliths, and (in one reported case) an immature tooth contained in a dermoid cyst.

EDITORIAL

COMPULSORY HEALTH INSURANCE FROM THE STRICTLY MEDICAL STANDPOINT.

When a law is proposed to lighten or to do away with evils existing or believed to exist, the subject is best understood and the problem solved in a satisfactory way by reviewing existing conditions followed by a study of the remedies suggested.

That insurance of any kind is a good thing is attested by the number of forms of insurance policies which may be written, and by the many people in the various walks of life who resort to them for self-protection in the presence of adversity. Health insurance is undoubtedly a most excellent thing, but whether it is good as a compulsory measure is another matter entirely. Or if good as a compulsory measure, the methods devised for making it compulsory may well be open to question.

The present situation may be summarized as follows: A large proportion of the community, unfortunately, however, a minority only, is abundantly able to take care of itself and provide for any contingency in the way of damaged health capable of happening. Concerning these, we have nothing to say. Then there is another large proportion abundantly able to live, and ofttimes to live well while prosperity lasts. Let sickness prevail among them, or let business lag with its necessary unemployment, and ruin stares them in the face. This latter class includes two subdivisions: (a) people of moderate incomes, who are able to pay ordinary expenses including medical attendance unless of a complicated or highly specialized character, who are ambitious for their children, and therefore strain every point in the way of good bringing up and education, and who make a good appearance before the public or rather in the public eye; and (b) the industrial population including the labor element and clerks, who cannot at

any time be said to have any too much capital excepting for absolute necessities at any time. Of the components of both of these subdivisions it may be said that many of them avail themselves of the present facilities for health insurance.

Of the first of these, it may be said that under ordinary circumstances, they are abundantly able to care for any ordinary health disturbance. If, however, a prolonged or obstinate illness comes along, and if such illness requires the consultation with physicians of special or unusual skill, and care by one or more trained nurses, they must necessarily become bankrupt. Unless protected by insurance, they ultimately go into the class of the very poor, and receive the advantages of the latter. Most of the people under this heading have incomes ranging from $1,500 to $2,500 per annum. With but few exceptions they do not belong to the laboring population, and will not come under the protection of the proposed compulsory health insurance.

The industrial population is composed of a variety of personalities defying classification. Some pay all bills, and some pay none. Some are insured, while others are not. Some work all the time, and even overtime; others voluntarily cease their labors at any time their whims dictate, being not at all ambitious to exert their full earning capacities. Some are thrifty and some are extravagant. Some are virtuous and of good habits; others are dissipated and wasteful; and so we might continue these antitheses indefinitely. Every one of our readers knows them, and sees them in every possible walk of life, from the dwellers in the palaces to the tenants of the cottages.

The majority of the insurance taken out by these people is not with the large insurance companies, but is of that variety known as the "Lodge." Some are unusually canny, and may belong to several lodges and it has been known to happen that the combined benefits from lodges may exceed the earning capacity of the individual when in health and on full time work.

For the care of the sick we have the large army of practising physicians ever ready to minister to the sufferings of humanity of any and all social positions. We also have the many hospitals, the majority of which are equipped to such an extent that their patients are able to command attention that cannot be purchased for less than one hundred dollars

per week. Such hospitals also have their private rooms where all services rendered are fully paid for by the patient, and where the total bills are truly enormous. Between these two extremes, there is no happy medium. The hospitals can take care of no one but the very poor and the very rich. They cannot, under existing circumstances, make provision for the majority of the community, the respectable person of moderate income. The latter receives his entire care from the family physician, who by this very fact, becomes the true representative of medical practice in his community.

The health insurance laws are designed, we believe, to relieve the condition of the large class of industrial workers, *i. e.*, all persons having an earning capacity of less than a specified figure, which figure is admittedly too low to provide for adequate medical attendance as well as for non-employment during the enforced confinement. Under present conditions it is known that the "lodge" helps out in many instances. Where the invalid belongs to but one lodge, and his sick benefits are less than his earning capacity, there is seldom, if ever, any imposition upon the benefiting organization. But when as sometimes happens, the "sick benefits" exceed earning capacity, the insured take advantage of the situation, and when so inclined do not hesitate to feign illness and are aided and abetted in their deceptions by certain amiable physicians, who do not hesitate to sign the necessary papers. Compulsory insurance proposes a protection amounting to from three-fourths to two-thirds of the earning capacity of the individual.

An esteemed correspondent has sent us some comments concerning compulsory health insurance. He says:

> "There has been no greater effective charity in the world than the medical profession. Charity with them has been a tradition that has been encouraged and perpetuated. To-day labor tells us that they do not want our charity; that it is repulsive to them, that they put off calling on us until their disease is far advanced, perhaps in a helpless state. Thus they argue that our charity is responsible for their advanced illnesses. Labor wants to pay for its medical treatment by instituting health insurance."

Concerning this we comment that any one wishing health insurance at the present time, can have it with the lodges or at market rates among the insurance companies. He can carry his insurance to provide for stipulated weekly sums alone or to include the payment of necessary medical services, even unto

trained nursing. The alleged repulsiveness of charity to many lacks confirmation when we observe the many who flock to dispensaries, especially those situated in thriving residential communities of modest pretense, and the many more who are able to pay their bills, but regularly neglect to do so. Procrastination in seeking medical advice is proverbial among rich and poor alike. There is a not unnatural averseness to medical consultations everywhere. It might be said truthfully that the majority of people seek the doctor only when absolutely necessary. Even those who are not derelict in this respect, fail to accept the proffered advice, as witness the deaths from strangulated hernia, appendicitis, pneumonia, and many other diseases, to say nothing of the illness that has followed ignoring advice to take care of the smaller ailments of mankind. Proper advice given in the beginning of such illnesses as insanity and tuberculosis, if taken early, would unquestionably rob these diseases of much of their terrors, but unfortunately, in the beginning of these catastrophes, the victims or their families are only too likely to look upon the advisers as alarmists, and then to follow their own sweet wills. To the compulsory health insurance bill we might with advantage add a clause forcing the insured to take the advice of skilled authority.

Our correspondent proceeds:

"The general proposition of health insurance if it could be worked out in the proper detail is probably a commendable endeavor. However, to put it into action demands the creation of a very complex and responsible organization, the running of which will be expensive, so that to the cost of the medical care of all those who come under the insurance act must be added the cost of the political and economic machinery incident to its administration. This means that the cost of health insurance that would give those deserving genuine and efficient medical advice, treatment, etc., cannot help being more than it is really worth."

Our correspondent fails to note in the cost of the insurance the profit to the insurance company handling the business, as well as the commissions of the insurance broker who writes the policies. Let us assume that these two items alone amount to 15 per cent. of the premiums, and we have labor mulcted to that extent by legal enactment. If, on the other hand, the employer is obliged to pay the premiums, then the act becomes practically an enforced increase of wages, for

which the public must pay in the shape of increased price of commodities.

"As physicians, it does not become our dignity to enter into the fight with the legislators of our State concerning fees; for if the practice of medicine does not afford us a proper remuneration for our endeavor, we should have intelligence enough to give up the practice of medicine and enter other fields."

We agree heartily with our correspondent. In these insurance laws the legislative bodies do not care for the welfare of any special business or profession. Especially do they sicken of the "doctors' fights." Whether compulsory health insurance will result in destruction of physicians' incomes or not, is hard to say. One physician practising in an industrial community believes that it will. It is certain, however, that it will cause a realignment of medical practice. This quite naturally will result in the advantage of some practitioners, just as surely as it will work disadvantageously to others. As our correspondent remarked in a previous paragraph, the problem is a complex one. A certain physician, and we are mentioning a specific instance within our own knowledge, having a practice alleged to be worth $10,000 gross, accepts what is virtually a compulsory insurance berth, for he now takes charge of the sick and health affairs of the employees of a corporation at $5,000 without any expenses to himself of equipment, automobile, office rent, etc. Besides, he claims that as his hours are now from 8 A. M. until 5 P. M. he is better off than he was before, as he has no business expenses of any kind, he has his evenings with his family, and he can rest at night undisturbed. But, having this particular berth, and a living assured him, this particular physician now assumes that he need not bother himself about self-improvement, and that he need not work so hard in studying. It is easy enough to see that with such principles the physician will not be worth $5,000 per annum to the employees of that company for any prolonged period of time. And this immediately brings us up to the next statement of our letter:

"It is our responsibility, however, to see to it that the people at large, and our representatives in the State, realize that nothing should be done that will discourage the study of medicine by the more ambitious of the community, lest the general public health will be made to suffer."

"It would be a crime to pass legislation making public health insurance compulsory, and then furnishing those who have been forced to contribute to this insurance, a 'wage-earning doctor.'"

Will the insured have the privilege of choosing their own doctors or must they depend upon salaried individuals who by reason of lack of competition are robbed of the natural stimulus to self-improvement? If the medical attendant is dictated, he cannot have the proper knowledge of his patient as would the family physician or so-called general practitioner. If he does not know the patient, he cannot know his illness. Even at the best the practice of medicine under such circumstances becomes a cold blooded scientific problem without the human element to commend it.

And in closing:

"The bill now before the legislature is being amended, and will undoubtedly be amended in many more particulars before being passed."

Our correspondent appears to be assured of the final passage of the measure, and we agree with him. It is bound to come. Personally we are not so certain that it will harm the profession financially. We are inclined to believe to the contrary, providing the compulsory insurance is in reality compulsory and takes in every one of a specified income. We understand that under the English laws, the medical profession receives over $1,500,000 that would otherwise go elsewhere. It is not the financial result we fear, for we believe that the aggregate receipts of the medical profession the country over will be increased. We fear exactly what our correspondent stated, namely, the advent into our midst of what might truly be called a "wage earning doctor," which our readers must bear in mind is entirely different from a salaried physician or medical officer. To have people treated by a doctor whose only idea is "to run 'em off," or get through by one means or another, is not conducive to good medical work.

It is plain to us that the bills will pass. If they prove to be good, we will learn something new. If they prove to be bad, they must be amended or repealed. We do not believe that these compulsory insurance laws will damage the physician's financial status; but they will cause great changes in the practice of medicine. We fear most decidedly that as health protective measures they will prove less efficient than the systems now in vogue, and that, after all, is the principal thing to be considered.

THE REPORTING OF VENEREAL DISEASES.

In the campaign being waged by the State of Pennsylvania against venereal infection, various weapons are employed, among which may be mentioned the following:

1. The placing at the disposal of physicians, for the diagnosis of cases of venereal disease, the facilities of laboratories conducted by the State.

2. The establishing of free dispensaries for the treatment of such cases.

3. The opening of venereal wards in hospitals receiving State aid.

4. The adopting of measures tending to instruct the public in regard to the true character of venereal infection.

No regulations for the general reporting of venereal diseases have been adopted by the State of Pennsylvania, the authorities having considered that these would only defeat the object aimed at, so long as the general public had not been sufficiently educated concerning the necessity for such regulations.

This is as far as the State has gone in the matter, but the city of Philadelphia has gone considerably further. Since January 1, 1918, there has been in effect a municipal law requiring every physician to report in writing to the Board of Health, on serially numbered, printed forms, the age, sex, color, nativity, marital state and occupation, together with the stage of the disease, the character and location of the lesions, the laboratory findings (if obtained), the date and source of infection and the degree of infectiousness, of every person under his or her care for gonorrhea, chancroid or syphilis. The name of the patient is not reported, but the number of the blank is put in the physician's case record. If the patient should leave his physician and place himself under another doctor's care, the second doctor must not send to the Board of Health a new report with a different number, but must communicate with the first physician and the Board of Health, giving to each the number on the identification card in the patient's possession. This prevents the duplication of cases on the records of the Board of Health.

Should the patient not return for treatment within ten days after the time appointed for him to do so, and should his physician not have received word that the patient is under

the charge of another doctor, he must communicate this fact to the Board of Health, giving the name of the patient, as well as the serial number. This enables the Board of Health to take such reported person and quarantine him.

Any person who violates, neglects or refuses to comply with the provisions of this law is considered guilty of a misdemeanor and is subject to a fine not exceeding fifty dollars.

In the case of persons seeking treatment at dispensaries or hospitals, a report must be made of their cases by name, and not merely by number. This might, at first, strike one as rather unjust to the indigent patient; but it is argued by the Board of Health that the class of persons usually treated at public institutions are more likely to prove a menace to the community through laxity in carrying out the regulations intended for the protection of others than are those who have been enough impressed by the seriousness of their condition to seek the advice of a physician.

The writer is indebted to Dr. H. C. Fretz, Assistant Diagnostician of the Board of Health, for the following statistics:

During the year that this law has been in effect (January 1, 1918, to January 1, 1919), there have been reported 1,833 cases, of which 1,033 were syphilis, 699 gonorrhea, and 101 chancroid. Allowing for 5 per cent. of duplications, there would have been 1,740 *bona fide* cases. Most of these were from institutions, and very few from private practice.

The writer is convinced that only a small fraction of even the cases under institutional treatment have been reported. Nevertheless, the Board of Health considers this beginning as an encouraging one, recognizing the fact that until better cooperation on the part of the medical profession is secured, there cannot be great progress made in this difficult task Many physicians hesitate to report these cases, not wishing to violate professional confidence, or feeling it to be futile to attempt to check the spread of venereal diseases in this way. They should remember, however, that, in the first place, as they are not required to give the name of the patient, provided that the patient is willing to observe the necessary precautions to avoid infecting other persons, they are not betraying professional secrets; and as for its being futile, that can not be told until the law has received a fair trial. The best way to test any law is to enforce it. Let us all get together

and assist in enforcing this one. If, after a fair trial, it is found to be bad or deficient, steps may be taken to repeal or improve it. L. T. ASHCRAFT.

QUESTIONABLE METHODS IN MEDICAL PRACTICE.

YEARS ago the staunch, aggressive pioneers in homœopathy, who were styled "purists," were in the habit of referring to their less orthodox colleagues as "mongrels." This bitterness in the homœopathic camp has fortunately long ago subsided; even the feeling between the two distinct schools of medicine has been swept aside. Homœopathy has not only come to stay but it has demonstrated its worth and soundness of principle so convincingly that there is no longer any excuse for strife between the two schools. Our colleagues who are returning from military service speak with feeling of the spirit of goodfellowship and respect which they encountered in their associations with the army medical corps. No official discrimination has been shown against our men, many of whom have been promoted to high rank and appointed to positions of responsibility.

But let us return to our subject. At the present time there is still going on in the rank and file of both schools of medicine questionable methods of practice which the modern purist might well allude to as "mongrel" practice. We might mention, first of all, the resort to many of the extensively advertised unofficial medicinal products and combinations which are recommended as short cuts to certain results, sure cures or easy substitutes for a legitimate prescription. The only excuse for prescribing the last named kind of prescriptions is either unwillingness to take the trouble to write a prescription or a lack of knowledge of dosage and prescription-writing.

Another practice to be condemned is the resort to the various untried new discoveries and synthetic preparations appearing almost daily. Many of these are non-official, most are unreliable and some are even dangerous. The desire to be progressive; to have something new to spring on one's clientele or on one's colleagues or plain gullibility are usually the motives responsible for this kind of practice.

Lastly we may mention the resort to substitutes for the old and well-tried drugs of the pharmacopœa. Most of these

substitutes are inferior in action to the drug upon which they claim to be an improvement or which they attempt to replace. There is always the temptation to wish something better and in striving to get something than that which has become standardized and which is economical and practical for daily use we accept an inferior but a more expensive substitute. A less commendable motive for using questionable substitutes is to escape the responsibility for using a well known drug for its strictly physiological action. Take the example of digitalis, for example. The hypocritical use of such remedies as convallaria, crataegus, adonis or cactus where digitalis action is called for is neither commendable from the moral standpoint nor successful from the pharmacological standpoint. The action of all of these is disappointing. Recently A. E. Hinsdale (*Homœopathic Recorder,* January, 1919), in a report of some pharmacological investigations conducted by him in the Materia Medica Research Laboratory of the College of Homœopathic Medicine, Ohio State University, states that cactus does not modify the heart's action or affect the circulation in any demonstrable manner.

There is still a worse form of hypocrisy in the use of opium. The writer recalls an experience with a colleague some years ago who claimed that he never made use of morphia in his practice. He did, however, occasionally make use of a preparation of opium called svapnia.

The epithet "mongrel" is no longer heard in denunciation of the homœopathic physician who was considered to have fallen from grace by giving remedies in alternation or by prescribing tinctures or even resorting to physiological and palliative methods at times. It might, however, still be applied to those practitioners of either school of medicine who instead of mastering the materia medica and using their own judgment in the treatment of the sick, follow the recommendations of the manufacturing chemist in their prescribing or resort to hypocritical subterfuges to cover up their methods of practice.

C. S. R.

LETHARGIC ENCEPHALITIS.

THERE may not be much in a name so long as the basic facts are thoroughly understood. On the other hand the character of a cognomen has an important influence on the career of the object christened. Within the past few weeks, the newspapers of the country have directed more or less attention to a malady observed in and about Chicago, and have chosen to refer to it as a type of "sleeping sickness," which is about to assume epidemic proportions throughout the country. The public and the profession have alike become interested, so an early review of the facts is eminently in order.

During and following the pandemic of 1889 and '90, there were many cases of cerebral disturbances having what was then regarded as a close etiological relation to the influenza. Generically they were known as the influenzal psychoses. Clinically, they presented remarkable symptomatic differences; hence subdivisions were recognized, although no attempts were made to determine pathological distinctions. Symptomatically, cases were comatose, delirious, maniac, paralytic, etc. Nevertheless they were one and all regarded as influenzal psychoses. It must be understood that at that period bacteriology was still in its infancy, and we were lacking in practically all of modern clinical laboratory methods.

In 1919, it is different. We have the laboratories and the trained workers. Perhaps there is a tendency to force conclusions ahead of the facts in the discovery of a new disease; but until something definite has been determined, it is the part of wisdom to cling to that which we know positively, namely that mental disturbances always have been known to follow in the wake of the influenzal pandemics. In the clinical study of these cases, and we claim that the spirit of clinical investigation is vastly improved over the systems in vogue 30 years ago, there has been a disposition to draw fine distinctions in the making of types. Such distinctions, we fear, are liable to confuse rather than to educate and if we follow them too closely, we will assuredly at one time or another, confound the influenzal psychoses with the psychoses that are with us always, as the syphilitic, the renal, the diabetic, etc. In other words, lethargic encephalitis of the present day must be

studied according to the spirit of the times, with avoidance of dogmatism.

The literature of this country bearing on the subject is limited practically to two articles appearing in the issues of the *Journal of the American Medical Association* for March 8th and 15th. Pothier reported eight cases from Camp Lee, Va. Of this number, but one died. In the issue for March 15th, we find a special article bearing the designation "Epidemic or Lethargic Encephalitis (Nona)." From this we learn that the term lethargic encephalitis was coined by Economo in 1917, to describe an epidemic disease characterized clinically by lethargy and pathologically by poliencephalitis. Netter is quoted as saying that similar cases were observed in 1890 and again in 1895, in connection with grippe epidemics.

The pathology of the disease has not as yet been determined. The *Journal's* authority remarks: "The brains examined showed little microscopically on the cranial surface beyond meningeal congestion, and perhaps quite a minor amount of patchy localized meningitis. On section, both gray and white matter were found to be the site of minute hæmorrhagic areas scattered irregularly." No specific region of the brain has been found to be involved. Note is made that the cranial nerve nuclei with motor function are attacked, while sensory nuclei escape. No recognizable organism has thus far been discovered.

The most frequent symptomatic characteristics are "lethargy and stupor and symptoms indicating lesions in or about the nuclei of the third pair of cranial nerves." Fever is a common accompaniment, and is usually moderate, but high temperatures have been noted. It hardly seems worth while to particularize further as to symptoms, for in drawing the fine distinctions at which some authors attempt, one is apt to confuse, unless one is able to place all the data in their proper clinical perspective. We feel that all writers thus far have failed to present a clearly defined picture that is capable of giving its reader a proper conception of the situation.

The prognosis is better than one would anticipate from the severity of the symptoms, the majority of the cases making good recoveries. In the 1889-'90 cases, recovery was the rule, though there were many instances in which it took months before the patient considered himself as back to his old mental standard and vigor.

In its editorial pages, the *Journal* further discusses the "new disease," and offers some reasonable hypotheses, and reviews the foreign literature pertaining to the subject.

We do not think that the 1919 observers have produced a new disease. They are simply describing a special form of cerebral disturbance well recognized as being connected with influenzal epidemics of previous years.

"I HAVE NOT THE TIME."

It has always been the bane of the executives of societies and others to be hampered in their work by the delays of others, the same old excuse being in order, namely, "I have not the time." So commonly does one hear this refrain, that he is almost ashamed of himself if he has the time to eat, drink and sleep, to say nothing else of the multitudinous duties of this world. He can take comfort only from the well known saying that "It is busy men only who have the time to spare"; and if you want a thing done, go to a busy man with it. The excuses given to account for the lack of time have been many and devious, and to date we have heard but one that we regarded as legitimate. A staff doctor was accosted concerning certain work delegated to him, and which he had not completed. He presented the unusual excuse for him, namely, "I have not the time." His interlocutor replied, "You know every man has the time if he wishes to take it." And then came the legitimate excuse: "I have been trying to understand this income tax." Secretaries and others can take comfort in the fact that the existence of this excuse will have ceased by the time this article appears in print.

"I have not the time" is often said of matters that will not consume five minutes in their doing, if one but gets down to work. "I have not the time" in its relation to small matters reminds us of a story. A horse gyp was in the habit of fixing up broken down animals, and selling them under positive guarantees that would attract purchasers. One day he sold a horse, guaranteeing that it could go a mile in 2:40. The purchaser took it home, and tried it out, but could not make better than 3:40. Indignant he sought out the gyp., and then occurred the following conversation: "See here, you guaranteed this horse to go a mile in 2:40; it won't do it.

The best I can get out of it is 3:40." "Well, all I have to say you must be in an awful hurry if you cannot wait a minute to get there." Now all we have to say is that men must be awfully busy if they have not the time to spare to do the many little things which take but a few minutes, the prompt performance of which goes a great way towards making the affairs of the world run smoothly.

The secret of having time to do things is first to "want to do them." No one can force a man to find time for things he does not want to do. Nothing is more convenient than to be inconveniently busy for the time being. The ability to perform is to be gauged by starting early in the day and keeping on moving until all work is completed. With this as a system or part of a system, it is astonishing how early in the afternoon one finds his work completed, and then he is ready for more work not previously scheduled.

We are sure that our societies would be greatly improved if secretaries were accorded a little more consideration on the part of the profession in the way of replies to letters and the handing in of papers. In letter writing in particular doctors generally are remiss, and again the excuse is "I have not the time."

The cure for this disease is "Do it now," and then you will not need the time.

There is one particular type of individual for whom all of us should say "I have not the time." He is the man who has not the time to read textbooks or medical journals. He is self satisfied, and happy and needs not our sympathy, nor does he want it. He is impossible.

The methods which have made a man successful are the methods which he must follow through life. If he has been a good student, he must continue such. Medicine is a jealous mistress, demanding as the price of her smiles the same diligent attention, yesterday, to-day and forever. Let one of her votaries say "I have not the time" and her favors are cast in other directions.

GLEANINGS

GENERAL MEDICINE

Conducted by Clarence Bartlett, M.D.

Significance of Referred Nervous Phenomena in the Diagnosis of Pulmonary and Pleural Inflammation.—F. M. Pottenger works out with great detail the distribution of the various nerve segments that supply the lungs and pleura as well as the more external thoracic structures. Involvement of pulmonary and pleural tissues, in the author's opinion, may embrace also the nerves and the effect, therefore, be reflected to more superficial parts in the domain of corresponding nerves, and this effect may be noticed as various motor, sensory and trophic disturbances. Five illustrations make clear the nervous distribution and other thoracic anatomical relations. Pleural and pulmonary inflammations do not express themselves in identically the same structures. At times the seat of the underlying lesion may be determined by the peculiar character of the respiratory motion alone. Inflammations of the lung and pleura tend, by reflex nervous action, to bring about limitation of movement of various areas of the chest. When the inflammation affects the portion of pleura that is below the fifth rib, the degree of limitation is usually greater than when it involves the upper portion. Sensory effects of deep-seated inflammations are also reflected to the surface. When the pleura over the central tendon of the diaphragm is inflamed, sensory phenomena predominate over motor; while, when the lung is involved, motor predominate over sensory. Reflex sensory disturbances caused by inflammation of the costal pleura are almost wholly confined to the surface of the chest wall unless the costal portion of the diaphragmatic pleura is involved, when the sensory changes may be, and usually are, transmitted along the intercostal nerves over the abdominal wall. A chronic inflammatory process in the lung may cause atrophy of the skin and subcutaneous tissue above the second rib anteriorly and the spine of the scapula posteriorly. Extensive chronic hilum inflammation usually causes atrophy of the skin and subcutaneous tissue in the interscapular space. Localized atrophy of the skin and subcutanous tissue elsewhere over the bony thorax is due to chronic inflammation of the underlying pleura in the path of nerve endings which are in reflex connection with the intercostal nerves which supply the atrophied structures.—*American Review of Tuberculosis*, February, 1919.

The Appearance of the Normal Membrana Tympani.—A—In Health it should be: (1) Intact, (2) Brilliant, revealed by cone of light, (3) Normal Color, (4) Normally translucent (posterior margin of hammer handle and long process of anvil are visible), (5) Marked contrast between the membrane at the annullus tympanicus and umbo with the remaining membrane, (6) Short process of hammer prominent, but not unduly so, (7(

Posterior half of membrane is larger than anterior half, (8) Superior half is larger than inferior half, (9) Normal mobility of membrane (pars flacida moves more than pars tensa with Siegle, and by inflation hammer handle moves with membrane), (10) Hammer handle alone congested is normal, due to manipulation of canal with otoscope or other instrument.

(We have ever been strongly impressed with the value of a knowledge of the normal standard as the only means of appreciating the abnormal. It is with pleasure, therefore, that we reproduce the above epitome from an address delivered by Dr. Geo. W. Mackenzie before the Clinico-Pathologic Society of Philadelphia.—*Eds.*)

Nervous Symptoms in Pernicious Anaemia; An Analysis of 150 Cases.—This study was made by Woltman of the Mayo Clinic. The salient points of the knowledge gained by clinical evidence of the relation which the nervous system bears to pernicious anaemia may be briefly summarized:

In 80.6 per cent. of moderately advanced cases of pernicious anaemia there is indisputable evidence of nervous tissue disintegration. This is in satisfactory accord with the pathologic findings, of which we may take the figures of Minnich, who demonstrated lesions in the spinal cords of approximately 77 per cent. of the cases of pernicious anaemia. Subjectively, some form of paraesthesia, such as numbness and tingling, is rarely missing.

Objectively, one finds the most striking disturbance in the pathologically altered reflexes, not forgetting the tendo-Achilles and Babinski reflexes and the disturbances of vibration and joint sensation, the former of which may readily be tested with almost any type of tuning fork.

As an adjunct in differentiating pernicious anaemia from other anaemias, the examination of the nervous system will be found of inestimable value; it often forms an easy way out of a most perplexing situation.—*American Journal of the Medical Sciences,* March, 1919.

Bacteriology of Tuberculous Kidneys.—Lesley H. Spooner (*Journal of Medical Research,* 1918, xxxix, 59) presents an interesting study of "The Bacteriology of Tuberculous Kidneys." He states that for years a popular belief has existed that the septic manifestations of tuberculosis were due to a mixed infection with pyogenic organisms; and that cavities containing caseous and purulent material resulted from the action of such organisms. The positive proof of such infection can be obtained only by a careful bacteriological examination of such lesions and as the study of the lungs in this respect is unsatisfactory, the kidney was selected. Spooner's conclusions are as follows:

1. The tubercle bacillus can be cultivated in pure culture from tuberculous kidneys.
2. In ten kidneys examined, positive results were found in fifty per cent. of the cases.
3. Dorset's egg medium is the most satisfactory for primary growth.
4. With this medium, only forty per cent. of the inoculated tubes showed growth in the positive cases.
5. Five per cent. glycerine agar is the most satisfactory medium for secondary cultivation of the organism.
6. In *no instance* was there *any evidence* either in the *kidney* or the *ureteral* urine of *mixed infection.* (Italics ours.)

7. Tuberculous caseation and suppuration is due to the activities of the tubercle bacillus alone.
8. Non-tuberculous infection of the kidneys is produced by one or more organisms which are always isolated from the renal tissue, or from the ureteral urine, and which grow readily upon simple culture media.
9. The clinical diagnosis of renal tuberculosis is suggested by the presence of acid-fast bacilli in the urine. If a *pus-containing urine*, obtained from the *ureter*, shows *no growth* upon simple culture media after *48 hours* incubation, another and very important *link is added to* the chain of *diagnosis of tuberculosis* of the kidney. (Italics ours.)

—*S. W. Sappington.*

Exploratory Puncture of Malignant Tumors.—Deelman (*Nederlandsch Tijdschrift voor Geneeskunde*, Amsterdam) expatiates on the superior advantages of puncture over excision for diagnosis of tumors. A fine needle is passed into the tumor and, as the piston is drawn up, scraping movements are made with the tip of the needle. The syringe then contains a little bloody fluid with minute scraps of tissue. It is remarkable how clear the histological findings often are in scraps no bigger than the point of a pin. He treats them with formaldehyde followed by acetone. This puncture can be done in the office or in the bed and he has never had any mishaps with it or by-effects in the twelve cases in which he has applied it to date, while the findings were extremely instructive, as he shows in a plate made from some of the cases. (Reviewed in *Jour. A. M. A.*)

Roentgen Amenorrhoea.—Siquot (*Revista Medica del Rosario*, Argentina). A girl of 14, robust and of a good family, swallowed a needle and was examined for half an hour with the roentgen rays, which entailed a severe dermatitis. She had been menstruating regularly for nearly two years, but since the roentgen exposure there had been no menstruation. In the third month she began to have severe headaches and at times abdominal pain, especially in the left flank. Ovarian treatment, mustard foot baths and purgatives, applied at the approximate menstrual dates have given no results to date. (Reviewed by *Jour. A. M. A.*)

Vaccination of the Tuberculous against Smallpox.—There is a current suspicion that vaccination of tuberculous subjects is attended by some, if not considerable, risk. Accordingly Louis Mark, of Mt. Vernon, Ohio, reports an experience with 200 patients, residents of a sanitarium, vaccinated under compulsion because of the presence of a case of smallpox in the institution. Not one of the patients exhibited other than the ordinary course of vaccinia as observed in the non-tuberculous, although a few were sufficiently sick (8%) to go "on tray" for one or more meals. There were no instances in which patients complained of trouble with the chest traceable to the vaccination.

The author regards compulsory vaccination advisable when smallpox breaks out in a tuberculosis institution.

The results in far advanced cases could not be differentiated from the results obtained in the first and second stage cases, and it would seem, therefore, that these cases should not be exempted when considering vaccination. —*Journal of the American Medical Association*, March 8, 1919.

Studies on Uranium Poisoning.—Karsner, and his associates have made a study of uranium poisoning. Uranium oxide itself is insoluble in water and as such *can* be non-toxic. Inasmuch, however, as it is soluble in hydrochloric acid there may follow sufficient of a solution to produce poisoning symptoms. The various salts of uranium all show poisonous effects, the action being mainly on the kidney. The authors were able to show that the main excretion is accomplished by way of the kidney, and that the severity of the functional and anatomical disturbance is due to the concentration of the metal in this organ. The presence of uranium in the kidney is not, from their point of view, due to a special affinity for the kidney, but rather the accumulation of it through functional activity of excretion. The authors were also able to demonstrate by an experiment that a state of acute intoxication was largely one of acid intoxication following upon the kidney lesion. They indicate that the amount of acid intoxication is in proportion to the kidney lesion and that the kidney disturbance precedes the evidence of decreased alkali reserve in the blood.—*Journal of Medical Research*, vol. xxix, page 157.

Treatment of Mercuric Chloride Poisoning.— Rosenbloom makes the following recommendations for the successful treatment of cases of mercuric chloride poisoning: First, administer the whites of 3 eggs beaten up in a quart of milk, and empty the stomach thoroughly by lavage.

Give 300 cc. of fresh calcium sulphide solution containing 1 grain to the ounce of water, by mouth.

Wash out stomach thoroughly and repeatedly with the calcium sulphide solution. Administer in powder or tablet 0.36 grm. of sodium phosphite or 0.24 gram of sodium acetate. If this is not available, give the following:

Sodium hypophosphite	1 gram
Water	10 mils.
Hydrogen peroxide	5 mils.

Use 10 times as much of the phosphite as of the poison taken. Give a copious lavage of the stomach with the above antidote diluted 20 times.

Pour through the stomach tube, after the above lavage, a solution of 3 ounces of sodium sulphate and 6 ounces of water containing 5 grains of calcium sulphide. Let these solutions remain in the stomach.

Give intravenously, after withdrawing 600 cc. of blood, 800 cc. of Fischer's solution.

Wash out the stomach morning and night, giving by the mouth after each washing, 5 grains of calcium sulphide dissolved in 3 ounces of water.

Give high colon irrigations of warm water morning and night, using 8 gallons of the water for each treatment.

Give a hot pack twice daily.

Give 8 ounces of milk every second hour.

Give every second hour 8 ounces of the following solution by mouth alternating with the milk:

Potassium bitartrate	dr. j
Sodium citrate	dr. j
Sucrose	dr. j
Lactose	dr. iv

Lemon juice.....oz. j
Boiled water.....oz. xvj

Force the patient to drink large quantities of the alkaline mineral waters.

Give a low fat and low protein and high carbohydrate diet for 4 weeks. Avoid salt in the food, as it increases the absorption of the mercury.

Give by continuous proctoclysis a solution containing 1 dram of potassium acetate, 4 drams of glucose, and 3 drams of sodium bicarbonate to the pint.

Keep the urine alkaline to methyl red.

Continue rest of treatment until recovery, usually a period of 3 weeks. —*American Journal of the Medical Sciences*, March, 1919.

Fumigation with Formaldehyd—A Substitute for the Permanganate-Formalin Method.—Dr. David Wilbur Horn proposes the use of bleaching powder and formalin in fumigating rooms. By the aid of a new and convenient apparatus, this new method has been compared quantitatively with the permanganate-formalin and the dichromate-formalin methods. The comparison leads to the conclusion that by using 620 g. of bleaching powder and 800 cc. formalin for each 1000 cu. ft. to be fumigated, as much formaldehyd gas will be thrown into the room as by the use of 250 g. of permanganate and 500 cc. of formalin, and at only one-sixth the cost. The bleach-formalin method is shown to be only one-third as costly as the dichromate-formalin method. It has been shown that the objections to the bleach-formalin method are without foundation in fact, and are contradicted by experiment and practice.—*Journal of Industrial and Engineering Chemistry*, February, 1919. (The bleach-formalin method has been made official with the health authorities of Washington, D. C.)

Palate Sign of Inherited Syphilis.—Tanturri has noticed that with inherited syphilis the edge of the soft palate as it arches over to the uvula has a characteristically irregular outline. Instead of forming a smooth edge, it looks dentated, as if both epithelial tissue and mucosa had been eroded. There may be a loss of substance for 1 or 2 mm. from the edge, but the flexibility of the parts and the color are not modified. Those presenting it were of all ages, from the newly born to 20 years old, and he asserts that the eroded outline of the palate arch on both sides may be accepted as positive evidence of the existence of inherited syphilis. In seven newly born with serious manifestations of inherited syphilis, this lace like outline of the palate was exceptionally pronounced.—*J. A. M. A.*, quoted from *Pediatria*, January, 1919.

Acquired Genital Syphilis in an Infant.—Case of a boy aged sixteen months with a chancre on the penis of two weeks duration is reported by Haines. This is extremely rare below the age of puberty. Investigation disclosed that the probable source of infection was a colored nurse who had a positive Wassermann reaction but no clinical signs of syphilis.—(*J. A. M. A.*, Feb. 9, 1918.)

Echinacea.—Many of our physicians are in the habit of prescribing echinacea in septic conditions, but we have never been satisfied with their indications. It appears to be strictly an eclectic remedy. Ellingwood (*Nat. Eclect. Association Quarterly*, March, 1919) is strong in his faith as to the

value of the drug, and recommends it in practically every condition demanding the administration of an antiseptic, antitoxic and anti-infectious agent.

Thuya from the Eclectic Point of View.—McCann, of Monticello, Ind., recommends the local application of thuya and olive oil in the treatment of tonsillitis and acute throat ulcerations, but unfortunately does not give the proportions he advises. He has also made use of the same preparation in the treatment of pruritus and vaginitis.

He claims for it beneficent action in the treatment of enuresis of children. McCann's positive claims are interesting, but unfortunately his failure to give his technique makes it impossible for others to duplicate his results. —*National Eclectic Medical Association Quarterly*, March, 1919.

A New Urinary Test for Acidosis.—This test, devised by Clifford Mitchell, of Chicago, is based upon the fact that the urines of acidosis subjects decolorize a water solution of iodin. The solution required is made as follows: To 145 c. c. of tap water, add 3 c. c. of Lugol's solution, and 2 c. c. of a saturated solution of picric acid, and make a thorough mixture. We then have a fine clear reddish liquid of bright color. To use, put the solution into a porcelain dish, and heat over a water bath to about 180 F. If a water bath is not abailable, care should be used to turn down the flame as soon as fumes begin to rise. After heating, the urine is added quickly but in small amounts. In acidosis the amount of urine required to turn the color of the reagent from a bright red to a bright yellow color is small, and the smaller the worse the case. In severe cases, 2 or 3 c. c. of urine will be sufficient to decolorize. In cases of moderate severity, 7 or 8 c. c. will show the reaction. Normal urines are not likely to show any color change under 20 c. c. unless there is undue concentration.—*Medical Record*, March 8, 1919.

The Potato Cure in Cardiac Hydropsy.—Lipiner (*Wiener Med. Wochenschrift*) advocates a potato diet in the treatment of dropsy arising from cardiac disease. The rationale, as claimed by the author is the relative restriction of liquid, dechloridization, and above all, the potassium content of potatoes. Furthermore, he claims that this tuber has a diuertic and cardiotonic action.—*Medical Record*, March 15, 1919.

Certainly we are offered many and devious types of diet for the treatment of disease. "Show me what a doctor likes to eat himself, and I will tell you what he offers to his patients," once remarked a very shrewd woman, and we fear that she is well nigh right. Cynicism, however, is not advancement; so we offer the above as a suggestion worthy of trial. It probably occupies about the same position as the Karell diet in cardio-therapy; capable of use for a period of a few weeks, after which time it becomes impossible of enforcement.—*Editors.*

GYNECOLOGY AND OBSTETRICS

Conducted by Norman S. Betts, M.D.

The Material Loss in Menstruation.—Editorial, *Journal of A. M. A.*, Vol. 71, No. 20). Although it is usually stated that the amount of blood lost at each menstrual period varies between 100 and 300 gm., there have been few accurate data available regarding the actual loss of body components incident to this physiologic change. Definite information is afforded by recent observations at the Nutrition Laboratory of Teachers' College, Colum-

bia University. In periods lasting from four to five days the highest observed losses through the menstrual flow were: of nitrogen, 3.4 gm.; phosphorus, 0.06 gm.; calcium, 0.02 gm.; iron, 0.04 gm. In comparison with the normal daily metabolism, losses of this degree are comparatively insignificant except in the case of iron. The output of nitrogen in the flow represents not more than 0.1 gm., equivalent to about 6 gm. of protein per day for the month. The losses of calcium and phosphorus are smaller than the chance variations in the usual output from day to day. If the daily requirement of iron by the adult is placed at from 0.010 to 0.015 gm., it is possible that the loss of iron through the menstrual flow is sufficient to suggest consideration of it in connection with the selection of the daily diet. At any rate, the iron output offers the only obvious indication of significant loss. The outcome of the analysis is, as the investigators themselves recognize, that there is no pronounced periodicity in the output of phosphorus and calcium, and that the amounts of these elements lost in menstruation are not sufficient to make the nutritive requirements of women for these elements materially different from those of men of the same weight.

Syphilis of the Uterine Adnexa.—Castano (*Semania Medica*, Buenos Aires, Vol. 25, No. 44) asserts that syphilis is always a factor in fibromyomatous lesions of the uterine adnexa. He has never seen such conditions except in cases of congenital or acquired syphilis. The tendency to sclerosis, when there is concomitant gonorrhoeal or streptococcic infection, results in lateral abscess formation with indurated, thick walls. Though it seems to be an extensive inflammatory mass only amenable to radical surgical treatment, yet under combined mercurial and iodide therapy the whole process is liable to retrogress completely. In his service he gives systematic treatment for syphilis as an indispensable preliminary in all cases of fibromas. Examination of the tubes after removal will often show that the lesions are gummatous in type. (No mention is made of Wassermann reactions. Further study, checked with serological tests, might be of value.—Ed.)

The Value of the Wassermann Reaction in Pregnancy.—Cornell and Stillians (*Journal of A. M. A.*, Vol. 72, No. 8). The report made by Falls and Moore of a positive Wassermann test in 11.3 per cent. of 160 cases of pregnancy raised a doubt in the mind of Cornell as to the correctness of these figures, at least in private practice. In support of this doubt, the figures obtained in other series showed a considerable variation. Commiskey reported 8 per cent. of positive results and Menten 13.45 per cent. positive, while Adair obtained only 6.5 per cent. positive. They feel that the high proportion of syphilitics in these series and the variation in results were due to the presence in them of charity patients, especially negroes. They therefore tested the question by parallel series of cases, one among private patients and another among those entering the Chicago Lying-In Hospital for free care.

The cases in the first series were consecutive, every patient in the practise of Cornell being given a Wassermann test at her first visit. Some appeared early in pregnancy, others were not seen until the time of delivery. In 107 cases, four gave distinct positive reactions. Two were doubtful and were excluded from consideration, as every other indication of syphilis was lacking. Twenty-one of the non-syphilitic cases gave histories of abortion or stillbirth, a percentage of over 20.3, while the percentage of syphilitics in the series was only 3.6.

The second series corresponded with that of Falls and Moore. It included 101 charity patients entering the Chicago Lying-In Hospital. Ten gave positive Wassermanns, a little less than 10 per cent.

The authors lay stress on the necessity of investigations in all classes of society in compiling such statistics as the above and to the surprisingly large number of non-syphilitic women who gave a history of frequent abortions.

Relation of Supplying Ovary to Causation of Sex.—J. G. Murray, Jr. (*Bulletin of Johns Hopkins Hospital*, Dec. 1918). The records of some 17,500 deliveries occurring in the Obstetrical Clinic of Johns Hopkins Hospital between 1896 and 1918 were searched for suitable cases by which the principal theory of Dawson could be tested. All those cases in which the actual location of the corpus luteum was demonstrated at cesarean section, laparotomy or postmortem examination, and in which there was no question as to the sex of the child, were tabulated. Seventy-five suitable observations were made on seventy women, five women each having two pregnancies. From analysis of his figures, Murray concludes that Dawson's theory cannot be correct; i. e., the ovary from which the ovum comes has no relation to the sex of the child. Furthermore, clinical evidence shows that determination of sex is probably not due to any factor present in the unfertilized ovum. The "chromosome theory" must be considered the only explanation of the causation of sex at present acceptable.

UROLOGY

Conducted by Leon T. Ashcraft, M.D.

Some Aspects of Prostatic Surgery, with Special Reference to Methods of Popular Choice: Pre- and Post-operative Treatment.—E. P. Merritt (*Jour. So. Car. Med. Assn.*, 1918, xiv, 224) considers the two stage operation advisable in the majority of cases because the end results are better and the patient's condition during convalescence is also superior. He states that the pre-operative treatment should include an estimation of the kidney function by means of the indigo carmine or the phenolsulphonephthalein test and increasing the urea and other solids of the urine by the aid of proper diet, the drinking of large quantities of water, rest, stimulation of the secretory glands and alkaline medication. The first stage of the operation consists of suprapubic cystotomy. The wound is allowed to remain open, and the author thinks that the gradual absorption of bladder contents by the raw surfaces has the effect of an autogenous vaccination. The second stage of the operation is performed ten or fifteen days later. The post-operative complications are uremia, disturbance of the cardiac function, hemorrhage, shock, etc. To prevent uremia one should give small doses of calomel along with diuretin and plenty of water. Hemorrhage is treated by use of packing, coagulin and horse serum, and shock, by the use of lucose enemas with sodium bicarbonate, Fischer's solution, soda intravenously, stimulants, strychnine, brandy, etc.

Clinical Aspect of Prostatic Hypertrophy.—E. Z. Wanous (*Minnesota Medicine*) states that the early symptoms may be intermittent or continuous, and are the result of mechanical interference due to hypertrophy of the gland. Urination becomes more frequent, more difficult and more prolonged. If some hours have elapsed since the bladder has been emptied,

as is the case in the morning, the symptoms are more pronounced. It is at this stage when operation promises the most, before the condition has extended to neighboring organs. At present, a great many cases do not come to operation until secondary symptoms have developed, complications caused by the intoxication from residual urine or the obstruction of the ureters. Exposure or over-indulgence sometimes brings on an attack of retention of urine, but although these cases appear to be acute, the symptoms have really come on so insidiously as not to have been noticed prior to the time of this attack. The author believes that the habitual use of the catheter should not be permitted, because it is sure to cause a cystitis. In the chronic cases, the retention of urine becomes more and more marked. A class of cases that may easily be mistaken for stone in the bladder is that in which the prostate is enlarged in front and encroaches on the bladder anterior to the orifice of that organ. The cystoscope constitutes the only means of making a definite diagnosis in such cases. Even very large glands may not prevent a complete emptying of the bladder. For this reason, no operation is required on account of enlargement of the prostate unless symptoms of retention exist. The fatal termination of cases of hypertrophy of the prostate is due to internal compression of the kidneys, pyonephrosis, cardiovascular changes, toxemia, high blood pressure, and defective renal function.

Prostatectomy.—H. G. Hamer (*Mississippi Valley Medical Journal*) attributes the lowering of the mortality rate from this procedure to increased experience, improvement in operative technique, and better treatment previous to and after operation; also to the fact that patients now come to operation earlier in the course of the disease, when their general health is in a better condition. There are, however, still quite a number of such cases that come to operation as a last resort. The usual preparatory treatment consists in systematic catheterization, continuous drainage, an anchored catheter, preliminary cystotomy, free water-drinking, proctolysis, urinary antiseptics, etc. The patient's ability to stand an operative procedure and the best procedure for each individual case are indicated by the phthalein test, Ambard's constant and the blood-creatinine test. If the patient's general condition is good, and the renal function not much impaired, the one-stage operation may be performed under general anesthesia, the author says; but he considers the two-stage operation unobjectionable in any case. He states that the weight of opinion favors the suprapubic route more than the perineal. He describes the operation in detail. Irrigation of the bladder is not required during the first week or ten days subsequent to the operation unless infection has occurred. In that event, the bladder must be irrigated two or three times daily, and urotropin, in ten grain doses, given t. i. d., before meals, as well as monobasic sodium phosphate, grains 15, in a glass of lemonade, two hours after meals, with plenty of water. Normal salt solution may be administered once or twice a day by slow proctoclysis, in order to prevent renal collapse.

Urinary Calculi in Infancy.—J. M. Maidagen (*Rev. Med. d. Rosario*, 1918, viii, 273) in twelve years of practice at Rosario, has seen only nine cases of urinary calculi in children. Three were in the bladder, two of which were operated upon; one was in the anterior urethra; four were preputial; and one was in the ureter. The symptoms in children are the same as those in adults. In regard to the treatment, surgery may be indicated for stone

in the bladder. The operation usually performed for the adult is suitable for the child, although suprapubic cystotomy with total closure of the bladder is the method of choice. It should be performed as soon as the diagnosis is made. The fact that in early childhood the bladder is situated more in the abdomen than in the pelvis makes the section easier. All that is necessary is to partly distend the bladder. The first of the two bladder cases upon which the author operated was in a boy of four years, from whom a stone 5 cm. by 3 cm. in size and 10 gm. in weight was extracted. In the second case, that of a boy of ten, the symptoms were suggestive of a stone in the left ureter. On operating, the calculus could not be discovered. It was thought that it had migrated to the bladder during manipulations, and this was proved to be true. Therefore, the wound was closed. Both patients recovered completely.

Urethral Calculi.—C. C. Mapes (*American Journal of Surgery*) believes it probable that the majority of calculi of the urethra originate in the lumina of the renal tubules, and migrate or gravitate to the other anatomic situations. They may become quite large and remain for several years without producing symptoms, but they usually wound the renal pelvis or the bladder mucosa. This causes hemorrhage and inflammation, which produce a change in the urine, allowing a deposit of layers of material different in character from the original calculus. The symptoms depend, to a great extent, upon the size and condition of the concretion, its situation, its etiology and the presence or absence of infection. Medical treatment is unavailing. The surgical treatment is summarized by the author as follows:

The exact anatomic situation and size of the stone must be determined by external palpation, urethroscopy and roentgenoscopy. Immediate surgical removal is usually indicated. When there are no complications, lithetasy, with or without meatotomy, is the operation of choice, if the size of the stone and its location will permit it to be extracted in this way; but if it is lodged within the urethral lumen distal to the peno-scrotal angle, urethrotomy should almost never be performed unless there are complicating lesions. If the stone is so situated that it cannot be extracted by the simpler methods or, in the absence of complications, when relief is imperatively demanded, one should resort to external urethrotomy.

Diagnosis of Urinary Calculus.—H. G. Woutat (*Journal Lancet*) says that the same conditions of the urine and the same symptoms, or nearly the same, are found in vesical calculus, prostatic hypertrophy, cystitis and tumor; and that, therefore, it is necessary to employ the cystoscope and the x-ray in making the differential diagnosis, the best results being secured by a combination of these two methods. Palpation with a bladder searcher frequently fails to discover the stone. In the majority of cases of ureteral calculi, pain is felt in the penis, labia or testicles, thighs, and costovertebral angle. It may be present over McBurney's point, and lead to a diagnosis of appendicitis, or, when high up, it may simulate gall-stone colic. When the stone is moving down the ureter, it may give rise to severe pain with frequency of urination and some hematuria. The stone may become lodged at the outlet of the kidney pelvis, at the brim of the bony pelvis, and at the point where the ureter passes through the wall of the bladder. The cystoscopic appearance of the ureteral meatus is characteristic, especially when the stone is near the orifice. The radiographic catheter, when employed in

conjunction with the x-ray, affords the best means of diagnosing ureteral calculi. Even by this method, however, about twenty per cent. of these stones are not discovered. Scratch marks on a wax-tipped catheter will often reveal the presence of these calculi. Renal calculi sometimes give rise to typical renal colic, but they may produce only pain in the lumbar region or indefinite pain in the abdomen after unusual exertion. Red blood cells may be found in the urine in this condition, which must be differentiated from hydronephrosis, incipient tuberculosis and tumor, the symptoms of which are very much alike, by means of the x-ray. When one stone is found, others should be carefully looked for. Pain, urinary disturbance and blood or pus in the urine should lead to a cystoscopic examination and the use of the x-ray, if the symptoms are not amenable to treatment.

Bladder Calculi in Infancy.—P. Borobio (*Arch. Espan. de Pediat*) claims that stones occur in the bladders of children most often between the second and fifth years. Of his sixty-eight cases, only two were in females. In twenty-four of the cases, the stones were oxalic; in thirty-five, phosphatic; in five, urio; and in four, mixed. The symptoms of calculus of the bladder are pain, incontinence and hematuria. Pain is a constant symptom and incontinence is usually present. Catheter examination and radioscopy will usually confirm the diagnosis. Treatment consists in hypogastric opening of the bladder and removal of the stone. He does not use lavage. He has had a mortality rate of six per cent. and three recurrences.

Autoplastic Methods Applicable to the Treatment of Urethral Fistulae Following War Wounds.—F. Cathelin (*Jour. d'urol.*, Par., 1918, vii, 267) reported concerning the treatment of ninety-four wounds of the genito-urinary organs, not including the testicles, of which thirty-seven were urethral fistulæ. Injuries of the penile urethra numbered eighteen, those of the scrotal urethra five, those of the perineal urethra nine, and those of the deep urethra five. He says that almost every wound of the external genito-urinary region is accompanied by an injury of the thigh or of the pelvis. The method he employed for the treatment of urethral fistulæ was that of cutaneous inversion with bipolar section. This method can be used in cases in which there is a loss of substance of the urethral wall, and is also applicable to every sort of canalicular surgery. It is almost always successful. Details are given of two cases of complicated fistulæ, the author stating that autoplastic penile and urethral surgery requires delicacy, patience and much time. He states that long intervals are required between the successive operations, but that the final results in almost all cases are very gratifying.

Operative Treatment of Urethral Fistula.—L. E. Schmidt, (*Surg. Clin.*, Chicago, 1918, II, 811) describes the technique of the inversion method which he has found satisfactory in a series of cases. In this procedure, a linear incision is made on each side of the fistula, and also a circular incision around its opening. The inflammatory tissue over and under the fistula is excised, and the fistula itself is thoroughly dissected. Only at one point, however, does the author remove all the inflammatory tissue up to the urethral mucosa. He emphasizes the fact that great care must be taken not to enter the fistulous tract or injure the mucosa. When this is done, the invagination is easily accomplished, and the inverted edges remain in contact with each other without the use of pressure or sutures. Schmidt employs two fine catgut sutures to hold the point of inversion. The operation is completed

by bringing the fascia and skin together in the usual manner. Before beginning the procedure the author performs an external urethrotomy and inserts drainage, in order to keep the urethra free from urine over this area. This also avoids the subsequent use of the catheter. A sound or urethroscope with mandrin is also introduced at the time of operation. A wick of iodoform gauze is inserted into the urethra beyond the point of operation, so that it will come out through the urethroscopic tube to the external urethral orifice. This wick is allowed to stay in place for two or three days; and the perineal drain, for six or seven days.

Case of Urethrectomy.—H. Bulloch (*Med. Jour. of Australia*) makes a report of the case of a man fifty-six years of age who had ruptured his urethra four years previously. An operation was performed soon after the receipt of the injury, and another a few months later. He consulted the author because of a double inguinal hernia. Bulloch advised that preliminary to treating this condition, the urethra should be operated on for stricture. Near the stricture, which was capable of admitting no more than a filiform bougie, a large mass of firm fibrous tissue was palpable. The stricture involved the bulbous part of the spongy and membranous urethra. Five cm. of the urethra was removed and the divided ends were easily joined.

War Wounds of the Genito-Urinary Organs.—A. Chelier and R. Glenard (*Revue d. Chirurgie*) report fifteen cases of extensive injuries to the urethra, twelve of which were bullet wounds, and three shell wounds. In five of the cases, the penile urethra was injured; in nine, the perineo-scrotal; and in one, the prostatic. In nine of the cases, there was a complete or incomplete section of the urethra. Wounds in this locality usually cause urethrorrhagia and disturbances of micturition. Retention does not persist for more than twenty-four hours, unless the case is very severe. Usually the patient urinates through the external wound, either partially or entirely. As these symptoms exist in about two-thirds of the cases, they form valuable diagnostic signs. If injuries of the penile urethra do not interfere with micturition, immediate intervention is not required; but perineo-scrotal or prostatic urethral war wounds should be operated upon at the earliest possible moment, usually by an external urethrotomy. When the scrotum is injured, one should carefully examine the condition of the testicles. The authors are conservative in their treatment of testicular injuries. They open and dress the scrotum, and leave the testicle undisturbed, if possible. Unless the injury is quite recent, no attempt is made to suture or reconstruct the testicle. Should it remain more or less ectopic and adhere to the envelopes, it may be freed and replaced in its proper position subsequently. The authors have examined after long intervals cases in which the testicles were preserved, and have found that even when atrophied, such testicles have not been painful.

An Operation for Reconstruction of the Urethra in Cases of Severe and Impermeable Stricture.—J. Guthrie (*British Medical Journal*, 1918, II, 111) performed this operation in three cases, with excellent results. After cutting away all the scar tissues, the defects in the urethra are closed by means of a long pedunculated flap of dartos, an ordinary catheter having been introduced, and the dartos and skin being stretched over the defect. The tube is removed at the end of two or three weeks. Guthrie considers this operation easier to perform and much more satisfactory than the grafting

operation. He says that the urethral epithelium grows rapidly from the strip left in the roof of the urethra and covers the entire surface of the flap of dartos.

Urethral Autoplasty for Loss of Substance with Destruction of the Urethra; Construction of a New Canal Without Stricture.—R. LeFur (*Paris chirug.*, 1917, ix, 679) reports a case in a soldier who was very badly wounded, and among whose injuries was a rupture of the urethra with enormous loss of urethral substance. The author was able to reconstruct the canal by means of a number of urethral and perineal autoplasties, by the strip method, and to produce a new canal showing no tendency to stricture. He states that there are certain principles that must be employed in these cases in order to obtain success. These are: wide removal of the cicatricial tissue; the freshening of the edges; the cutting of the autoplastic strips from absolutely healthy tissue; a wide freshening of important surfaces; the drawing off of the urine; and the avoiding of the retention sound.

A Flexible Metallic Urethral Sound with Filiform Guide.—H. W. E. Walther (*Journal of Urology*, 1918, II, 253) describes a new flexible ureteral sound with a filiform guide with which he has been successful in passing strictures when other instruments have failed. The sound is the length of a ureteral catheter, and has a semi-olivary tip of the size 11 Charriere. The extremity of the tip has a screw-thread projection by which it may be joined to any ordinary LeFort filiform. As the shaft of the sound is flexible, it is as resilient as any catheter and possesses much more rigidity. The bladder is distended with water, and the operating cystoscope introduced. The filiform guide, firmly screwed to the flexible sound, is fed into the catheter channel of the cystoscope. When the filiform has entered the bladder, the usual catheterization is attempted. The author considers the LeFort filiforms much firmer than the ureteral filiforms most commonly employed. By manipulating the filiform with a cork-screw motion, one may be able to get through even the most severe type of stricture. Having passed the narrow point, the instrument is pushed up until the olivary tip engages the stricture and dilates it.

Painless Meatotomy.—L. L. Michel (*N. Y. Med. Jour.*, 1918, cviii, 461) states that success in this operation depends upon the divulsion upon the membranous band or collar back of the fossa navicularis at its junction with the urethra. He has been able to perform the operation without pain in the following way:

He distends the urethra with one-quarter per cent. cocain solution, which is held for three minutes. He then introduces a cotton applicator, which has been soaked in the cocain solution, into the urethra for a distance of an inch. He next introduces a very fine hypodermic needle under the skin in the median raphe at the margin of the glans and the frenum, and infiltrates with the cocain solution up to the edge of the meatus. He then removes the cotton applicator and severs the constricting band. The next step is to incise the glands through the infiltrated area, the bleeding being controlled by placing within the urethra a pledget of cotton oiled with vaseline.

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SOME OBSERVATIONS OF A MEDICAL OFFICER IN FRANCE.

BY

MAJOR JOHN DEAN ELLIOTT, M. C., U. S. A.

Associate Professor of Surgery in the Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of Germantown, March 17, 1919.)

It would be impossible to give even a brief resumé of the work done and the results obtained by our medical department in France in a short paper, so I shall not attempt to be technical in my remarks this evening, but confine them to some personal observations in field, mobile and evacuation hospitals.

Surgery varied within wide limits according to the type of warfare that was being carried on. During the trench fighting well equipped hospitals were permanently located very close to the front lines and when the activity was not too great complete and complicated operations were carried out. The patients reached these hospitals within a few hours and they could be retained in them until the outcome of their wounds was ascertained.

As a result military surgery underwent great changes. At the beginning it was based upon knowledge gained in previous wars, notably the Boer and Russo-Japanese wars, and in civil life. The wounds were partially sutured and drained, but this treatment was disappointing and unsuccessful, at times disastrous. This was due to a number of factors; among them was the great increase in the use of the high explosives, the improvement in the transportation of the wounded, for many were admitted to treatment who formerly would have been considered hopeless, and the very large percentage of

wounds which were infected by the gas producing anaerobes, which led to very profound intoxications, mutilating operations and perhaps death.

When competent observers were able to follow the course of a wound from shortly after its inception to its ultimate issue, they realized that the prevention of infection after it had been received was not the acme of success, as had been supposed; but, on the other hand, all fragments of a high explosive shell, including such types as trench-mortars, rifle and hand grenades, carried infective material in with them and deposited it along the tract. Another fact soon brought out was that the force of the high explosive missiles was so great that the tissues along its course were devitalized, would become gangrenous and form an ideal medium for the growth of the anaerobes.

Instead of partial closure the wounds were opened widely and antiseptics of various kinds were applied to them continuously and throughout their extent. Dakin's fluid was the most successful of these and in competent hands excellent results were obtained with it.

The next step in advance was the early and complete removal of all severely contused and devitalized tissue, and injuries treated in this manner produced little pus and many of them could be closed at a very early date by a secondary suture. While the infective material was carried in and deposited by the foreign body the tissues did not take up the bacteria until a number of hours had elapsed and a distinction was made between contamination and infection. With prompt removal of the foreign bodies and all infected material the wounds remained sterile. During the spring of 1915 a number of the wounds were being closed immediately and so great was the improvement of technique that in 1917 Lemaitre was using primary suture in 70 to 75 per cent. of those of the soft parts with more than 90 per cent. of perfect results.

There are certain pre-requisites to the successful carrying out of this procedure: the patient must reach the operating table very quickly—within eight hours is a good working rule, but as a surgeon's experience increases he may lengthen this period and in properly selected cases it has been extended to twenty-four hours or even longer. It is necessary to keep the wounds under close observation of the operator for at least two weeks, so that further transportation can not be under-

taken before that time. All infective material and devitalized tissue must be removed and in order to do this the entire wound tract must be brought under visual examination. The hospital must be completely enough equipped to furnish all the requirements for the operation and the preparatory and post-operative treatment. The general condition of the patient must be such that he can withstand a general anesthetic and, if necessary, a severe and prolonged operation.

Many times all of these conditions could not be fulfilled and the immediate closure of the wound was not advisable. Whenever possible the operation was then carried out in the manner already outlined, but not sutured, and the wound was treated with antiseptics by some surgeons and aseptically by others. When infection was suspected the laboratory was able to prove the truth of these suspicions, if they were unfounded a suture could be made within a few days, the so-called "delayed primary suture," and the results were almost as good as with immediate closure. Otherwise a secondary suture with the removal of as much scar tissue as possible could be undertaken at a later date or the wound allowed to heal by granulation. Unfortunately the last was frequently necessary when the streptococci were present, for these bacteria, as at home, gave rise to the most severe and persistent infections.

All classes of wounds were treated in this manner. My preconceived idea of the sacredness of such regions as the brain, the lung and the large joints received a sudden, I might say startling, jolt when I perceived what could be safely accomplished with care, experience and proper equipment.

Such, in brief, were the conditions when our country entered the war and they continued until the German drive against the British just a year ago. Mobile warfare then began to replace that of the trenches and this spread along the whole front and the activity became greater and greater until it culminated in the defeat of the Huns and the signing of the armistice last November.

Some of us were fortunate enough to receive lectures upon military surgery from officers who had been in the war from its inception and had personally followed the various methods mentioned. It was also my good luck to see some very excellent operating at several French hospitals before becoming actively engaged in this work. When our division first moved to the front we went into the sector where our lines crossed

the border between France and Alsace, and the Field Hospital to which I was then attached took over part of a French hospital at a little village named Fraize. There, four miles behind the front line, we found a completely equipped hospital of eight hundred beds and a splendid surgeon, who had been operating in it for two years. It was in an army barracks which had been finished shortly before the war began, so the buildings were modern, large, airy, of stone or concrete construction and the sanitation was excellent. In this territory the actions were confined largely to sudden barrages, raids and shelling of artillery positions, so the number of wounded was not great and each could receive all the service necessary to carry out any form of treatment thought desirable. Thus it was an almost ideal location to observe operations and follow out their results.

In our army the medical department was supplemented by the addition of consultants and teams which covered all phases of surgery, but the organizations attached to the divisions and armies remained much the same. The field hospitals were insufficiently equipped to carry out the type of operations which had to be performed and to give them the necessary equipment would have interfered very seriously with their mobility which is their greatest asset in open warfare. So mobile hospitals were organized to supplement and act in conjunction with them and take care of the non-transportable cases. In some divisions and corps field hospitals were furnished with X-ray machines and operating teams and a number of patients who could not be moved any further were operated. But the great majority of field hospitals acted as enlarged dressing stations and the ambulance companies remained free to transport the wounded.

The mobile hospitals were mobile in fact as well as in name, but their material was so cumbersome that it took at least forty-eight hours for them to change stations, while it was possible for a field hospital to move and be ready to receive patients within a very few hours.

The evacuation hospitals were greatly enlarged and really became semi-stationary, so that they leapfrogged each other as the advance continued. Some of them were capable of taking care of fifteen hundred patients. They were often arranged in groups of two or more and were placed at a railhead whenever possible, so that the wounded could be comfortably and

safely moved to a base hospital after having received the necessary treatment.

Specialism was carried out as far as it could be and shock teams, orthopedic teams who cared for fractures and operating teams were organized. Whenever possible, wounds of certain parts of the body were sent to special hospitals or turned over to teams who had had experience in operating in such regions as the head, chest and abdomen, but such fine distinctions could not frequently be made as the number of patients increased during the closing months of the active war.

The operating teams were sent forward from the base hospitals or were made up at the General Headquarters at Chaumont by the temporary withdrawal of officers from their ordinary commands. They were in charge of the operator, who had an assistant, an anesthetist, and one or more nurses and hospital corps men. These small units were given the necessary instruments, gowns, gloves, etc., and could be sent from one hospital to another as the exigencies of the situation demanded.

The exact method of employing them varied in different hospitals, but the object striven for was the same, to have the patients operated as soon as they were fit to be taken to the table. Even when comparatively few patients were being received half a dozen teams might work for an hour to clean up the operations which one team might have done in five or six hours, so that in case of an unexpected rush the hospital would not become clogged.

In the evacuation hospital to which our team was attached during most of the Argonne drive the patients were sent to the base almost as quickly as to us. Often 90 per cent. of those operated upon during one night would have been evacuated by the next afternoon. On the contrary, it was possible for us to retain any of those who required further observation from us, particularly those with wounds of the head, the abdomen, the large joints, or if gangrene threatened.

In this hospital the operating rooms were sufficiently large to accommodate six teams at a time and the twelve teams attached to it were divided into two shifts, each of which was on duty for six hours one day and eighteen the next. Each team was provided with three tables so that one patient could be prepared and anesthetized, while a second was being operated upon and third was being replaced by another patient.

The requirements for successful primary suture were not present and none was attempted, the object of our treatment was debridement of the wounds, that is, the removal of all devitalized tissue and whenever possible the foreign body, with the institution of free drainage of all parts of the wound. My own idea of military surgery was that it would be crude and rough, but I found, as in civil life, this depended upon the individual operator and a great deal of judgment was required to obtain the best results. Unnecessary removal of too much tissue would cause irremediable damage, while an incomplete operation might lead to a prolonged convalescence, the loss of a limb or a fatal outcome. Also it was not always easy to avoid important nerves and the main arteries when the anatomical structures had been radically altered by destruction of large parts of the soft structures and comminution of bone.

In order to properly carry out debridement the effect produced in different structures by a missile from a high explosive must be borne in mind. The wound of entrance in the skin is usually small, but the destruction in the subcutaneous tissue covers a wider area. The deep fascia usually splits and the tear in it takes the form of a slit with bruised edges which will often grasp infected material, so that here especial care must be used in looking for bits of clothing or other débris. The effects upon muscle vary more than in any of the other tissues. The tract may be narrow and almost clean cut, or its structure is such that the force may be transmitted to a long distance and a large part or the whole, of one muscle or of a group of muscles may become the seat of gangrene. Viability is demonstrated by reaction to gentle irritation and the blood supply should be *shown* by oozing from the finer vessels; the circulation may not be interfered with in the larger vessels and yet the vitality in the surrounding tissue be lost. The bone may be slightly injured or badly comminuted, but the tract in it should be debrided, especial attention being given to the medullary canal where the force is also transmitted for some distance and bits of foreign body may lodge. The general consensus of opinion was that fragments of bone attached to periosteum should be allowed to remain, but experience and judgment were particularly necessary to gain success when a bone had been shattered.

At the bottom of the wounds were usually found pieces

of the clothing, which were tightly squeezed into a firm wad. This wad might be attached to the foreign body and come away with it or it might require separate removal. It always contained numerous bacteria and experiments proved that within forty-eight hours after soldiers had been bathed and given sterile clothing, this clothing was saturated with pathogenic bacteria. Advantage was taken of the absence of clothing on the hands and face to treat wounds in them with less severity.

Attached to the operating room was an X-rays plant and practically all patients passed through it. Plates were seldom used but the location and size of foreign bodies could be very accurately given by an experienced skiagrapher. As the tracts were opened from the point of entry to their termination the exact location of a missile was not so important as if it were being directly cut down upon. When primary suture was being performed or a subsequent search for a foreign body was being made the X-rays were used at the operating table and were absolutely necessary in many such operations.

There is a considerable difference between following the course of a normally travelling bullet and one made by a rough fragment of a shell. The former seldom carries in clothing and makes a small wound in the soft structures which is soon obliterated by retraction and swelling, but the latter tears through and, if the way is not lost, can usually be followed to its end. Instruments should very seldom be used to probe, when absolutely necessary the finger is best for that purpose, but bits of clothing or other foreign bodies, small clots, contusions and such small evidences may be used to find the right direction. It was often of great value to know the position of a patient when he received his injury: a muscle may appear to be intact in an extended limb and yet when the limb is flexed the opening may come into view. This fact should always be borne in mind when more than one layer of muscle has been involved and if possible a limb should be placed in the position it occupied when injured.

General anesthesia was used in nearly all wounds, except those of the head or when very slight. It was impossible to tell the extent of damage of the deeper structures by inspection and great destruction was sometimes met in what was an apparently slight and superficial wound. In head injuries a conscious patient was able to give great aid in the removal of

foreign bodies, broken down brain tissue and other débris. This was accomplished by having the patient cough and it was surprising to see the amount of material that could be evacuated in this manner.

The treatment of shock was of the greatest importance. The patients would reach the hospital after trying rides in an ambulance, perhaps after lying out in the cold and damp for a number of hours and having lost considerable blood. As already stated, the shock wards were in the hands of specially prepared teams who devoted their entire time to them. When thought best patients were placed in these wards to be prepared for operation and were ordered to be returned to them whenever the surgeon deemed it advisable. Many lives were undoubtedly saved and many operations were performed, which would otherwise have been impossible, by the prompt and intelligent use of heat, salt solution, stimulants and transfusion.

With the number of hours spent at the operating table it was impossible for us to follow our cases and the after treatment was conducted by the ward surgeons who belonged to the personnel of the hospital. Exceptions were made in those patients who, on account of the severity of their condition or for some other reason, were ordered to be retained and the operating surgeon would then have as much oversight of them as he desired until the danger was passed or he had them evacuated.

I can not close without adding my bit to the praise which has universally been given to the bravery of our men. During the time that it was my fortune to treat those who had been so recently wounded I never heard one complain or one of them utter a word of sorrow about having been injured. On the other hand they were cheerful, were thankful to receive the heat from our one small stove and patiently waited their turn to be treated. Sometimes as they lost consciousness under the anesthetic it was extremely pathetic to hear them go over their last experiences before they fell and I shall never forget one man who kept calling to Jim to come on and not be afraid of the Dutchmen as he was there. The man whom I was treating turned to me and said, "Jim was his buddy and was killed this afternoon, but he does not know it."

WHAT THE GOVERNMENT IS DOING TO RECONSTRUCT HER DISABLED SOLDIERS.

BY

CAPT. JOHN A. BROOKE, M.D., M.C. U.S.A., PHILADELPHIA.

PREPARATIONS were made on a large scale for the reception and care of the disabled soldier. These plans were based on the probable number of casualties for a three years war. A certain percentage of these were figured as amputations, the likely number of bone and joint cases considered, as well as the nerve and tendon injuries and other disabling conditions. The idea was to carefully classify these cases and place them in hospitals specially equipped for the treatment of the various types of cases. This scheme had not been completely worked out when the war ended abruptly; soon there was a curtailment of plans and it is only now that the full purpose of this plan of the Government is working out as intended.

In developing this seemingly efficient method of handling the disabled, we have appropriated largely from England and France, as well as the enemy. In the great stress of the early days of the war, when so little attention could be given these cases of our Allies, great opportunities to secure best functional results were lost. Coming later into the conflict enabled us to avoid some mistakes made by others and to use methods that proved of great value. Much has been done in the way of prevention of contractures and deformities by proper treatment during the acute and early convalescent stage.

In England the curative workshop which has been of the greatest help, was developed through the initiative of Col. Robert Jones, aided and supported by the former King Manuel of Portugal.

The vocational training, the selection of an occupation which is possible with their disability, is followed out to a certain extent by most all countries engaged in the great conflict.

In our reconstruction hospitals in this country, the industrial workshop is a very important part and has three main objects: 1st—It is productive, making all orthopedic appliances, braces, splints, etc., provisional arm and leg parts, as

well as producing various things in metal and wood; 2nd—It is a curative workshop where men can use the injured extremity to increase motion and develop power in the weakened and atrophic muscles; 3rd—It is used for vocational training where one can be trained in a work compatible with his disability and which later will enable him to support himself and family.

The psychology of this condition has been studied and every effort is made to keep him from thinking he is a cripple, and impressing him with the thought that he is or soon will be able to fight his own battle of life regardless of the handicap. Courses are given in cabinet making, carpentry, leather working, rug weaving, book-binding, auto-mechanics, telegraphy, tailoring, mechanical drafting, jewelry repair, metal working and artificial limb construction.

What the final status of these cases with their varying degrees of disability will be can only be surmised but the outlook at present is very promising. Much depends on the man, his intelligence and perseverence. It is exceedingly hard for a man who has followed a line of work for years, to adapt himself to changed surroundings and take up an entirely different vocation. We can realize the difficulties of the man who has lost both arms, yet most of these will be wage earners.

In cases of amputation, it is exceedingly important that the patient be given a provisional appliance as soon as his stump wound is healed and he is urged to use it continually. This preserves the muscular tone and power in the stump and has a good mental effect, for he will not fully realize the loss of the limb nor exaggerate his handicap.

As a permanent artificial arm or leg cannot be fitted for several months—six or more—after the wound is healed, because of shrinkage of the stump, a temporary prothesis is provided. Those for the leg at first consist of a plaster socket encasing the stump and attached to a crutch pilon or peg-leg. After a few weeks a Trautman test leg, consisting of a plaster or paraffin socket with side irons and a jointed wooden foot, is used or the so-called Liberty leg of wood and fiber is substituted. These are worn for the balance of the six, eight or ten months. At the end of that time the stump has shrunken and is toughened and accustomed to weight bearing and is ready for the permanent appliance. During this period of preparation many fittings and changes in the socket are often

necessary. When starting out with the provisional appliance, instructions, usually to classes, are given as to the use of the leg, various exercises being insisted upon to develop proficiency in handling the artificial limb.

For the arm amputations a provisional apparatus with a leather socket and side-irons and a forearm extension is used. To this is attached a hook or hand with fingers fixed in flexion to use as a hook; there is a movable thumb to grasp tools or other articles. We have found this prothesis a very satisfactory one. It allows the men to follow certain lines of work and indulge in games; besides, there are no empty sleeves.

Through the War Risk Insurance Bureau, it is arranged to give each man, when discharged from the army, an order to purchase from any recognized artificial limb-maker any permanent arm or leg that he desires. This is furnished in addition to the appliance given at the army hospitals and is considered more of a Sunday arm or leg.

The measures adopted to hasten the preparation of the stump for weight bearing are hydrotherapy, massage, heliotherapy, graduated pressure to toughen the tissues for weight bearing. Many of the cases that remain unhealed have an osteo-myelitis, sequestrae are often present and must be removed. Others need traction to pull the soft tissues over the end of the stump to form a good pad. Tissue grafts are often necessary to cover the ends of the stump and scars must be loosened up by manipulation. A full range of motion of the stump must be secured and contracted tissues stretched or severed.

The paralyses caused by peripheral nerve injury are treated according to the extent of the paralysis, whether complete or partial. In the partial paralyses the muscles involved are placed in a state of relaxion by holding the limb in a position to take all stretch off the weakened muscles. For example, if the external popliteal nerve is injured, the anterior group and the peroneal muscles are involved, the foot is then held in slight dorsal flexion. Massage, electricity and muscle training are used to develop tone and power in the weakened muscles. The nerve may be caught in scar tissue and it is then necessary to free it and surround it with a pad of fat or bury the nerve in the belly of a nearby muscle to prevent other scar tissue forming and impinging the nerve. If the nerve is actually severed, the scar tissue that has formed between the cut

ends must be removed and an end to end suture of healthy nerve tissue done and placed in position as free from tension as possible. One cannot hope for a good result from nerve suture if all adhesions and contractures of muscles and ligaments are not removed and free joint motion established before attempting the nerve repair.

For ununited fractures, especially with loss of considerable substance, bone grafts are used but as most of these were associated with infection, many months must elapse before operative work can be undertaken.

The injured soldier taken from a life of extreme activity and excitement and placed in hospital for a long period during convalescence develops a mental inertia which is greater than in those suffering from the industrial injuries of civil life. In addition to massage, mechano-therapy of the Zander apparatus and the like, helio-therapy and hydro-therapy, it is necessary to develop a certain initiative in the patient and stimulate a certain interest in things done to bring about recovery. The curative work-shop gives the opportunity to substitute for the unproductive mechanical therapeutics, a method of producing a better result in a shorter time and combines with this some actual industrial product. He is helping himself and is a producer. His recognition of this is a mental stimulus, he thinks he can be as much of a success as his neighbor, that he does not need sympathy and charity but can tackle real work despite his handicap. He need not confine his energies to that of a night watchman or a flagman at a railroad crossing because he has lost an arm or leg.

This optimism is further increased by the aid of moving pictures showing what the partially disabled can do, through the hopeful attitude of the instructors, through stories written by well known magazine writers that the Government has called in to spread the propaganda, and also by bringing certain clever men having crippling deformities before the soldiers and showing how well they can get on regardless of their handicap.

With the patients in the curative workshop, it is necessary to grade the work according to the kind of disability and to modify it from day to day; to adjust the machinery and to equip with special tools to meet the various needs.

Noticing the advantages of these methods of treating the disabled it seems that we can apply the same principles of

treatment to those injured in civil life, and all that has developed during this great emergency can be handed as a legacy to the industrially crippled after the war.

OUR PRESENT WORLD WAR AND ITS INFLUENCE ON MEDICINE AND SURGERY.

BY

E. A. KRUSEN, M.D., NORRISTOWN, PA.

(Read before the Homœopathic Medical Society of Pennsylvania, September, 1918)

THE present world war, which is consuming the attention of the whole civilized world today, is drawing on the medical and surgical skill of this country as it has never known before. There is no profession or class of men who have contributed a larger percentage of their men and women than the physicians and surgeons of this and other allied countries. Many have responded to the call of their government, out of purely loyal and patriotic instincts; others responded to a call from the Surgeon General's Departments of our Army and Navy, while others from an unsatisfied ambition for the development of research work in our Army and Navy Hospitals.

Special work along medical and surgical lines, has been given by the government to thousands of physicians who are now in the Medical Reserve Corps of the United States Army. They have been and are now receiving what we might term a post-graduate course of instruction in the various lines they have been best adapted for, or in which they had previously worked. It is the intent of the general medical board to make them more proficient in caring for the sick and wounded. This, no doubt, will have a salutary effect, in many ways, especially will it be true for those trained in the specialties, such as laboratory work, Rœntgenology, chemistry, pathology, surgery, the different psychoses, especially shell shock and the various forms of insanity, which have developed in our camps, hospitals and trenches, abroad, and in our cantonments at home.

Of the recent developments, none have been of more value than the use of ambrene in the treatment of burns and

the Carrell-Dakin fluid, in the treatment of open wounds and the various infections. In emphasizing the prophylactic value of the antitoxins used for small-pox, typhoid, para-typhoid, tetanus, etc., all of these have been used in a routine manner and the results have proven their value in preventing epidemics of disease, from which our armies have suffered in wars of the past.

All of these things will do much in maintaining the good health of our armies, but beyond the use of prophylaxis, how much has been added to the knowledge of medicine, from the treatment of our soldiers in camps? From the little information I have been able to gather, treatment of the sick has been purely empirical and followed in regular routine.

In the craze for surgical honors, Materia Medica has been almost forgotten in the maze of new, sensational and more superficial adjuncts, to the study and treatment of disease. Seventy-five per cent. of the work of the average physician is along medical lines and yet only a very small per cent. of the time is taken up by the teaching and study of Materia Medica. This may have been partly brought about by the requirements of the State Boards of Medical Examiners and Licensure, who demand thorough training in all the allied branches, such as laboratory technique, including microscopy, chemistry, bacteriology, physiology, pathology, anatomy, the different specialties, and a very little or small proportion given over to Materia Medica.

This seems especially true of the Homœopathic Materia Medica. Several years ago some of our larger universities began to drop the teaching of Materia Medica, in a large degree, and have approached almost to drug nihilism. While this was true of one or two universities, it appears to me that others have followed and with them carried the trend of public opinion so far that our various State Boards have been led to look upon Materia Medica as of minor importance. Is it a small wonder then, that Homœopathic Materia Medica has suffered? Unless a physician is deeply impressed with the paramount importance of Materia Medica, he will more than likely drift from it into an easier and more or less unscientific method of treating the sick.

The present war thus far had not brought to light any better methods of treating disease than before, and few re-

ports from the Army Hospitals indicate any improvement and are more discouraging than otherwise.

When the Government a few weeks ago, took over the universities and colleges of this country, I felt it would be one of the broadest and farthest reaching movements that our Government had yet made, filling our colleges with the young manhood of our country and giving them the best of instruction in the various departments that the country can produce, and along with this, military training. This will most certainly place at the disposal of our nation's leaders the very best of material for the Officers' Training Camps. Our Medical Colleges will share in this training, and the truth and efficiency of the Homœopathic Law of Cure will be demonstrated to the country better and more forcibly than ever before, stronger by far after the war, than it has ever been.

Homœopathic physicians are sought for and admitted to Army and Navy Medical Reserve Corps, as they should be, and stand second to none in their merits as physicians and surgeons, but their special branch of training is not recognized and given free and fair trial in treating the sick in our Army Hospitals. It is true, no doubt, that even if this was desired, it would be a very difficult matter to make it practical, when physicians of the two schools were mixed and scattered over a large number of the hospitals, but where homœopathy could be given a trial, would it not be a great advantage to the suffering public, to have our Materia Medica thoroughly proven? If homœopathy is worthy of existence, let it have fair treatment from those who profess to follow it. If it will not stand the test, then let it be relegated to the scrap heap of medical junk and be forever forgotten. How many among us today, who would be willing to see such an ending to our Law of Cure? Not one, I am sure, and yet you are all asleep at the switch.

Something must be done to arouse the Homœopaths of our country to the fact that the teaching of homœopathy in our colleges is being poorly taught and more poorly practiced. In some colleges, especially in Boston, it is abandoned and not taught at all. Who is responsible for this? Is it you? Is it me? Is it the teachers? Yes, we are all equally guilty. Each is responsible for the part he assumes in practising and defending the Law of Cure he professes to follow.

DISCUSSION.

Dr. C. I. Wendt, Pittsburgh, Pa.: Dr. Krusen mentioned the attitude of officers in the army towards medicine. As Dr. Sawyer said last night, the men who are in the army will be better doctors for their army experience. I received a letter, four or five weeks ago, from a colleague of mine who is now doing laboratory work in a camp hospital. He says that the men over here will have to look to their laurels when the army doctors get back and I believe it is true. There are a lot of men who have practiced all their lives in communities without hospitals and laboratory facilities. These men are getting into the army and seeing the facilities of the hospital laboratory. They will want to carry out similar work when they return. They will never forget what they have seen.

What I said about the doctors of small towns who do not use the laboratory was not intended to imply that it was because they did not want to; but because they have not the facilities. They do not know what a Wassermann is. The reason they do not use it is, they do not know the technique. It is the same way with a great many other laboratory procedures that are important, or would not be emphasized.

Dr. G. Morris Golden, Philadelphia: I would like to speak of several points in the paper of Dr. Krusen. Dr. Wendt spoke of the effect of army life. It is, no doubt, true that this training tends to make men systematic observers; and the subject of history taking will become a prominent factor. Now, as the result of this, we are going to compile numerous statistics; and this is going to help us from a diagnostic standpoint. But the point that Dr. Krusen has taken and which is well taken, is, what effect are we going to have from the standpoint of therapeutics? As the Doctor says, it is positively nil. That is true. I have talked to several men from camps, and they say that the treatment, from a therapeutic standpoint is of the rankest routinism. It is said that war is no place to study therapeutics; it is the place to study diagnosis and prophylactic medicine. Another factor that the Doctor mentioned is that of shell shock. We have seen considerable written as regards the character of shell shock and various kinds of psychoses, and various mental states that are developed; but I was talking with a man who had come in contact with a prominent physician in one of the leading hospitals of Canada, and he said that it was the French who were cute enough to recognize that in many cases shell shock

is nothing but hysteria or malingering. These men are in a hospital for several weeks and are given a rest. They are then sent back to the trenches with favorable results.

Dr. I. D. Metzgar, Pittsburgh: I am sorry I did not hear all of this paper regarding the matter of therapeutics. The life of our School of Medicine as an entity will depend entirely on the colleges. We who have been trained in homœopathy will never give it up. No matter where we go, if the facilities are at all available, we will practice our own special form of therapeutics. But that is not true of the future; for there are not forthcoming boys and girls who will study as we have. Our school is jeopardized. It is a good thing that a lot of us are getting out into army work, so that we may specialize more on diagnosis and laboratory methods along with our specializing on therapeutics. We shall be better and stronger. We shall still practice homœopathy when we come back. The longevity of our school will not depend on that, but on our getting students and on the college's being faithful to its trust in giving these students homœopathic therapeutics.

HOUSING AND CHILD WELFARE.

BY

JOHN IHLDER, PHILADELPHIA

The stranger has a means of sizing up a community, your community, that gives him a more truthful picture than a statement of bank clearances or a list of industries. It is the infant death rate. The infant death rate is the most sensitive and accurate index we have to the general health conditions and these in turn reflect your people's standard of living and the character of their citizenship. Because, fortunately, the infant death rate is due not to any one cause but to the many causes which affect us all; to bring it down to the irreducible minimum we must remove all these causes. And in the effort to do that we shall improve the health of older children and adults and call into play the public spirit of the community.

Among the causes of an undue infant mortality is bad housing. There are other causes which are more easily attacked than bad housing, an attacking which yields quicker results. If the babies of a community have been fed on dirty

milk, the substitution of clean milk will produce a marked decrease in the death rate and this substitution may be brought about more quickly and more easily than can that of good dwellings for bad ones. Until the latter substitution has been brought about, however, not only will the death rate remain higher than it should be, but—and this is even more important—the community will not have reached a point where it can stick. Until the people live in good houses, cleanliness cannot become a habit with them, but will be merely the apex of an occasional narrow salient here and there which must be maintained at the cost of ceaseless vigilance and effort against the enveloping enemy: custom, temporary profit, personal laziness, and an unfavorable environment.

Good housing means widening the sides of this salient until we have straightened our whole line to the point where the apex was. For good housing involves not merely individual action or even group action, but community action. It involves not merely good individual dwellings or a good neighborhood, but a good city. For there must be public services that can be rendered effectively only on a city-wide basis; waste removal and disposal, the supply and distribution of pure water, regulation of the erection and maintenance of all dwellings. Until we have these, efforts of individuals cannot be wholly effective.

The whole purpose and method of housing work are built upon the assumption that the family is the unit of society, that upon the family depends the future, which alone gives meaning to any work of consequence, and that the family and the future center in the child. This does not mean the infant alone, our scope must be wider. We must take into consideration not only the new born, but its close successors, the child of pre-school age and the child of school age. The word "wider" is used advisedly because, from the housing point of view, adequate provision for the baby of one or two years is not adequate for the child of 6 or 16.

So in considering the infant we must look ahead. It is not, in surgical parlance, a successful operation if the infant is saved and the child dies or fails to reach its full development. But if we have provided adequately for the child through its years of development then we shall have provided the essentials for all its family. It is the child who needs the most; before it and after it, needs diminish. That which the

child needs in a purely physical sense, additional to the things needed by the infant and the aged, may be summarized in the word space; space indoors and outdoors for health, normal growth and development. The infant and the adult may be provided for adequately in a tenement or apartment house, or even in a hotel. The child needs a home. It needs the freedom possible only in a house of its own. It needs the open air, the contact with the earth, coupled with family supervision, possible only with private yards in a neighborhood of homes. For these public playgrounds and recreation centers offer no substitute, though they have great value when fitted to their environment. Athens, not Sparta, was the glory of Greece.

In addition the growing, developing child needs the spiritual influence of a close family relationship, the sense of the family as a unit, which is immeasurably strengthened or weakened according to the type of its dwelling. So housing workers have set as their ideal the single-family detached house or cottage.

With the needs of the child clearly in view so that the operation of saving the infant may be truly successful, it will be fairly safe for us to return to our means of judging your community and make the reduction of infant mortality, so far as it may be affected by housing, the method of our work.

Instead of describing all the forms that bad housing may take and seeking to point out their injurious effects, let us list the few and simple essentials of good housing—aside from the space and type of dwelling needed by the older child—and use them as a measure of conditions in your community. These essentials are:

1. *Removal of Wastes:*

A.—Sanitary, convenient and private toilets. In large towns and cities there should be indoor water closets accessible without passing through a living room or bed room, and they should be connected with a public sewer. In small towns and villages where there are no sewers and where septic tanks are impracticable there should be well enforced regulations for the regular emptying and cleanly maintenance of vaults.

B.—Sinks connected with a sewer or covered cesspool to remove waste water.

C.—Regular and frequent collection of garbage, refuse and ashes.

D.—All wastes properly disposed of so as not to pollute streams or create a nuisance.

2. *Supply of Water.*—In cities and large towns a public supply of pure water distributed to every dwelling. The tap should be within the house or apartment and have under it a sewer-connected sink or catch basin. In small towns and villages not able to provide a public water supply, wells and springs should be frequently inspected and protected against contamination.

3. *Light and Air.*—Every room should have a window area large enough to admit abundant light and air and opening upon an outdoor area large enough to permit the sun to enter and the air to move. This, while it partakes of the space needed for older children is far below their requirements in amount and is a minimum for infants or adults. Properly the outdoor area should be large enough to permit the sun to strike every window except those with a direct northern exposure—and in our future city planning we shall provide against windows with a direct northern exposure.

4. *Number and Arrangement of Rooms.*—This again partakes of the space required for older children, but for infants the minimum is less. The arrangement of rooms should be such that the one occupied by the infant may have privacy, yet be capable of ventilation. There should be such a number of rooms in the dwelling that the infant's sleeping room will not be overcrowded with other sleepers.

5. *Protection Against the Elements.*—It is taken as an axiom that the house should be weather tight and dry.

6. *Protection Against Fire.*—The fire hazard is comparatively infrequent, but increases with the size of multiple dwellings. Such dwellings, therefore, should be of fire-proof construction when more than three stories high and should always have more than one way of egress.

The fifth and sixth essentials listed may be dismissed with their listing because the fifth will have general acceptance and because in Pennsylvania the multiple dwelling is still chiefly a thing to be prevented rather than one requiring immediate attack. Dismissing them then, let us consider the others.

One of the most striking and constant differences in mortality rates existing in the whole field of vital statistics is to

be found when urban and rural districts are compared. This difference appears in all age periods but is especially great in the case of infants and young children, who are most affected by the influence of adverse environmental conditions. Mr. Henry H. Hibbs gives foreign and American statistics that bear this out and then goes into details which emphasize the importance of housing.

The significant point he makes is that while infant mortality usually is higher in the city than in the country, yet there has been a much greater reduction in the urban rate than in the rural during recent years, due largely to effective work to improve the urban environment. In some cases the urban rate has been reduced to the level of the rural and he intimates that similar effective work in the country would have equally gratifying results. "Such figures as those quoted," he says, "demonstrate beyond a doubt that the improvement in sanitation, in housing, and in living conditions in general, combined with the great advance in preventive medicine, has been so successful in the cities that a wider extension of the campaign to the country is imperative."

We have no space to go into these statistics in detail, but as illustrative of their import we may quote a few from a Pennsylvania community. The Federal Children's Bureau made a study of infant mortality in Johnstown two or three years ago. This study showed an infant mortality rate that increased regularly in accordance with unfavorable housing conditions.*

Total number of live births, 1,463. Total number of deaths during first year, 196. Rate, 134.0.

Dry Homes	122.5
Moderately dry homes	139.9
Damp homes	156.7
Bath	72.6
No Bath	164.8
Water supply in house	117.6
Water supply outside	197.9
City water available	132.0
City water not available	148.4

*Henry H. Hibbs, Jr. Infant Mortality: Its Relation to Social and Industrial Conditions. 1916.—Russell Sage Foundation.

Yard clean	99.9
Yard not clean	169.3
Water closet	108.3
Yard privy	159.3
House Clean	113.5
House Moderately Clean	163.8
House Dirty	186.7

This report also showed a lower infant mortality in homes where there was no overcrowding, and especially where the baby's sleeping room was not overcrowded, and lowest of all where the baby had a separate bed.

Of course such statistics do not prove that any one of the factors listed will alone produce the decline in death rate indicated. A bath tub or a clean yard usually go with other factors in a better standard of living, all of which act and react upon each other. Moreover these factors are of varying effect upon different elements in the population. The southern Italians, for example, accustomed as they have been to living in the open air, to dwellings seldom or never tightly closed, to securing warmth in winter from the sun, feel much more than do some other peoples the effect of being shut up during the winter in our tight, stove-heated dwellings.

But making all such allowances the evidence is strong enough to warrant the statement that bad housing is one of the important factors in infant mortality. And running through the phases of bad housing given above, as it does through the essentials of good housing, is the motif of cleanliness; a clean community, a clean neighborhood, a clean dwelling. And this motif of cleanliness links up housing with other kinds of work designed to save the lives of babies. What advantage is there in securing the delivery of clean milk to the home if it is then permitted to stand uncovered in a kitchen swarming with flies? Why handicap the physician and the nurse who bring a new life into being by giving them a dirty, dark, unventilated bed-room to work in, by giving them only such water as may be brought from a yard hydrant or a source even more distant? Why, if the baby has been born in a hospital, send it back to the perils of a filthy, fly-clouded neighborhood?

The use of cleanliness as our guiding theme not only links up housing with other work, but it forms a connecting thread for most of the phases of housing work as well. Waste removal, supply of water, admission of light and air, prevention of overcrowding, proper repair and up-keep of the house, all are necessary to cleanliness. And to secure them we must work along the two lines necessary in an effective housing campaign; securing public services, educating and stimulating the individual.

When our houses and our community are clean, not once a year or semi-annually, but all the year; when they are not only broom-clean nor even with scrubbing brush and water, but by sun and air, as well; we shall have advanced a long way toward good housing and a minimum infant mortality.

DISCUSSION.

Dr. George B. Moreland, Pittsburgh: There is nothing more important in our country at the present time than looking after those individuals who are about to enter into the work that we, ourselves, are trying to do at this time. This war has demonstrated fully how neglectful we have been in the past along these very lines, and it is exceedingly important that we hear things of this sort, so that we may understand how to look after them, and that we may understand that there are people who are doing these things. It is time that we, as physicians, the ones who should be teachers and the leaders in lines of this sort, should get busy. While we want to give all encouragement to members of the laity who are doing this, it is primarily the business of the physician to, at least, start it.

Dr. Edwin L. Nesbit, Greensburg: I wish to extend to Mr. Ihlder the idea that perhaps the housing people are now coming into their own. The demands of the war in the housing of munition workers in any of our large centers, have compelled the communities to take a purely materialistic view of the subject of housing. As we find that it pays to have people housed well we shall find our business men more inclined to support these movements for better housing. At the present time, I have been struck with the unsanitary conditions which are resulting from overcrowding and through the fact that we give no attention to the house in which the family live. I have seen American families, under the stress of present economic pressure, living, two or three families together, in conditions absolutely inimical to health and the wel-

fare of the present generation. They are living under conditions that, a few years ago, would only have been suffered by recent immigrants. If that is the situation, is it not serious to us, as physicians? Cabot, a few years ago, directed the attention of the medical profession to what he was pleased to call "the backgrounds of disease"; and now that we have, in a measure, broken ourselves away from what I sometimes call the pin-hole view of disease, and since we have turned the microscope about and are beginning to look at the situation telescopically, we see that these backgrounds are really the conditions favoring the development of disease. Without the correction of such conditions, the diseases themselves can never be eliminated. We center our attention on the individual; and, to some extent, our provisions for the individual are penal, rather than protective. We regard him, particularly if a victim of a contagious disease, as a person to be hedged about by certain restrictions; but, after all, is it not quite as important for us to consider the habitats, as well as the victims, of disease? The immediate habitat is the house.

In line with this thought, I have been endeavoring, for ten years past, as the result of an outlook on housing in the vicinity of Philadelphia, to advance the idea of the right sanitary clause in every lease for rented property. In other words, such a clause, if it were written into leases, might read as follows: "Since its last occupancy, this house and its surroundings have been inspected and made habitable by order of the Board of Health." That would give the individual a clean house to start with. At present, he has no assurance that the sanitary conditions are right; and when, as the result of unsanitary conditions, his family succumb to illness, he becomes the victim of repressive and penal treatment, rather than preventive. At present, our Boards of Health do not have the right of original inspection or of investigation. Until the condition inimical to health becomes an actual menace and eventuates in some epidemic, our local health agencies have no authority to proceed in that instance. The idea of a sanitary clause would simply be, not so much for the purpose of enabling fumigation or inspection of the building; but it would give entrance to the inspector, and enable him to get sanitary statistics and make them a matter of record, by which repeated contagious diseases are recorded in such a style that it becomes a comparatively easy matter to show the owner of a house that such a property is undesirable. In that sense, we do insure the individual a measure of protection, instead of coming down on him later and regarding him as an object

for our collective punishment for his misfortune. We thus add discomfort to his misfortune. Then, acting on the impulse of self-preservation, he neglects the measures that are designed to protect him and others.

Dr. I. D. Metzger, Pittsburgh: We Americans are likely to wince at this sort of thing. When the Government says, "Do this," or "Do that," we think, "What right has the Government to interfere with us?" Younger civilizations do that. Older ones come to submit to dictation. Whatever has been accomplished in this line for the general welfare has been done largely through legal enactment. Take the cleaning up of the Panama Canal and the sanitary measures in your own community: Just in so far as the law has forced them, have the people been willing to give up.

We doctors should take the lead in this, and try to improve the economic conditions that stand in the way. We have three times as many people as should occupy a certain area. Colored people have come in, fifty thousand of them, during the last year; and no homes have been provided for them. They must find some place to live in, if they are going to live here; and they find places with their friends. The Government should step in and say: "You cannot live here, if your employers do not provide you a place." If this is put before the people, we shall have better conditions. If they cannot afford to live in better houses, someone must pay better wages, so that they can afford it. It goes back to the economic question in that way.

Dr. Horace G. Carmalt, Pittsburgh: We here, in Pittsburgh, know the truth of many of the assertions contained in this paper. We have certain districts in which we do not like the death rate at all, and the increased death rate is in those districts where we have the crowding. The better districts where the death rate is lower, are those outlying districts where we have more space, more air and better housing facilities; but, in line with this, there is a movement on foot here to reach all classes of the community. I wish to bring this to your attention. It is embodied in a zoning and building enabling act, which will have to be granted to our city and other cities of this class by the Legislature before we can do anything. When this zoning enabling act, as it will have to be called, comes up in the Legislature, we should like to have the influence of the men in this body toward its passage, so that the authorities that are here may have an opportunity to further this question of good housing. The zoning ordinance which will cover the conditions of light and air, is one of the

basic things that such cities as this need. I would urge your favorable attention when this comes before our Legislature at its next session.

Mr. Ihlder, closing: In regard to the question raised by the last speaker, I would say that I confine myself to the health side. The economic side is quite complicated. Here in Pittsburgh, you have a variation of it. You have big estates that control large areas of bad housing. This is similar to what was done in England. The Prince of Wales has a similar estate. He has a motto that came down to him from his German ancestors, "ich dien," meaning I serve. He is serving by tearing down houses and building others. The Church of England also had such an estate, and gave Octavia Hill an opportunity for betterment by turning over to her slum properties of the bad landlords of London. Having been reached there, they can be elsewhere; but the problem varies in different cities. We all have an economic trouble to work out. This is more acute than ever, since the coming of the war, which has brought us so many persons whom we have to house. Formerly housing has not been a business proposition, but a speculation. Our trouble has been that people have said, "It is none of our concern to provide housing," and were indifferent; but today, because they have to have men, and can only hold good ones by having decent houses for them, they are beginning to take an interest in this matter. But they have not seen the whole economic problem. In our war centers, a year ago, we in Philadelphia saw it coming, and called public attention to it. We had meetings and sent the facts to Washington, but our big industrial men were not interested. They were interested in getting contracts. They did not want to divert labor. They wanted to build the plant up to its greatest capacity. They did not realize that the war might continue for several years, and that we want to continue at our strongest to the end, and not squander all our strength in six months. So in our big industrial community, because we did not divide our labor and build houses to take care of future growth, we are coming near the end of our productive ability. Our plants can expand, but we cannot get the men to work them.

There are other problems that, in this brief closing, I can merely hint at. If the hands in Pittsburgh are tied, so are those in other communities; but, in varying degrees, our hands are being loosened. We have a fair law in Philadelphia. We can send inspectors, but we have no money to do this. The citizens' organization send in half the complaints that keep

the inspectors busy. The city should make the inspections, and not depend on us.

In Pittsburgh, you have power to make original inspections; but you have not a real housing law. You have merely a codification of ordinances. The zoning act will make provision for not having the kind of houses that lie between here and the William Penn Hotel, houses in dead-end courts. Philadelphia and Pennsylvania are the leaders. We have a State law which gives a limited supervision over certain kinds of houses. We want a real State housing code, which will enable all our communities to regulate properly and maintain their dwellings. There is no regulation that prevents tenement houses with windowless rooms, let alone maintaining them in good condition. Thank heaven! the tenement house type has not become prevalent in Pennsylvania; but we do have windowless rooms used as bed rooms, not only in Philadelphia, but in some of the smaller towns. That is merely symptomatic of housing troubles.

SOME FACTORS IN BLOOD PRESSURE USEFUL TO THE GENERAL PRACTITIONER.

BY

G. MORRIS GOLDEN, M.D., PHILADELPHIA, PA.

Clinical Professor of Medicine, Hahnemann Medical College, of Philadelphia.

Read before the Homœopathic Medical Society of Chester, Delaware and Montgomery Counties.

THERE are few subjects that have received more attention, and about which more has been written in the past ten or fifteen years, than blood pressure. Yet all its phases and possibilities have not been grasped or worked out to the point of practical value to the observers.

Many deductions and conclusions have been reached which have been found to be in part untrue, and many erroneous statements in regard to diagnosis, prognosis and treatment in individual cases have been found. There is a cause for this, and it appears to have been the difficulty that too many physicians rest a diagnosis, etc., on one single factor, namely, systolic blood pressure, whereas in every case a diagnosis should not be reached until all the data have been

observed, analyzed, and each factor in the clinical picture given its proper value.

In relation to recording blood pressure several important points should be observed. Firstly, the auscultatory method should be used in estimating pressure, it being decidedly more accurate than the palpatory method, especially in determining the diastolic pressure. A second point is, that one blood pressure reading is not sufficient; it should be taken repeatedly, at subsequent visits or several readings within a few minutes of one another at the same sitting and an average or standard of that patient be obtained. At first estimation it is not uncommon to find a difference of from five to fifteen points greater than the average, as the result of the psychic factors. Thirdly, the erroneous practice of estimating only the systolic pressure; its value alone from a practical standpoint is almost useless, and many times valueless, leading to an erroneous impression and conclusion. The diastolic pressure should always be estimated, it being of decidedly more importance at times than the systolic pressure. It is the diastolic pressure that tells at what pressure the circulation is maintained, or in other words the load the heart is compelled to carry while at rest, or as it has been termed "the heart load," of which I will speak later in reference to its estimation and significance.

Frequently upon examination, a systolic blood pressure not abnormally high, or within limits for the subject examined, is estimated, but a diastolic reading may show an abnormally high pressure, such pressure evidencing an increased load upon the heart, while if but a systolic reading were taken only fallacious reasoning would follow. Fourthly, the estimation of pulse pressure is extremely important; it consists of the difference between the systolic and diastolic pressures. Normally it should be about one-half of the diastolic pressure. By its variations we are enabled to estimate to a certain degree the efficiency of the heart as a pump, the load it is carrying, oncoming myocardial failure, and the functional capacity of this all-important organ.

From these few introductory remarks it is evident that the estimation of systolic, diastolic, and pulse pressures, and their co-relation are important factors in the study of cardiac disease, whether primary or secondary.

There is a type of increased blood pressure that I wish

to mention and emphasize—and from my observation is one of the important reasons why study of blood pressure is of no value in the estimation of some. As a man reaches middle life and onward, the vessels lose their elements of elasticity and propulsion of the blood stream; in other words, they become rigid and lose their pulsating factor. What is the result? In order that the organs may functionate properly a certain blood supply and pressure must be maintained, but when these foregoing factors in the vascular system show themselves, the various functions of the organs suffer. The heart is called upon, it responds in its duty to maintain the proper blood supply, and associated with the vascular changes, a rise in blood pressure takes place to overcome the deficiency. Hence as a man grows older a rising systolic and diastolic blood pressure, in proper relation to one another is necessary to his existence, and the normal function of his vital organs. In such a person we may say he has established a pathological increased blood pressure, which is necessary from a physiological standpoint, or as one worker has tersely stated it, a "pathological norm." Frequently we see in such cases, a physician has succeeded with good intent in reducing such a blood pressure, only to find that the secondary condition developed was far more serious than the first.

An example of this type came under my observation several years ago, in which a patient, age 40, with a systolic pressure of 180 and a diastolic pressure of 120 was observed. He had few if any symptoms, and his physician had given large doses of nitrites and succeeded in beating down the systolic pressure to 140, normal for that subject, but there had not been a corresponding decrease in diastolic pressure, hence the heart was carrying the same load, with a decreased pulse pressure. What happened: the patient developed a uraemic state, suppression of urine, comatose condition, etc. Upon the withdrawal of nitrites, and by use of stimulants the blood pressure was raised to its former readings and immediate improvement took place.

There are two factors to gather from such an observation. Firstly, that an increased blood pressure without symptoms is best left alone. Secondly, the giving of the nitrites in such types of cases in large doses is a dangerous practice, and the best method of procedure is to regulate the diet, method of living, and rest in such cases, and the nitrites only

to the point of relieving distressing symptoms when indicated. In many of these cases quite a high blood pressure is encountered, with a urine free from casts and otherwise practically normal, which is of little significance when compared to the case evidencing only a moderately high blood pressure, associated with low specific gravity and casts. This illustrates the fact that a high blood pressure may be present for years without trouble, but that a moderately high pressure with clinical manifestations, or as may occur at times a lowered pressure, may cause disaster in a very short time.

A factor of importance in blood pressure, is its relation to pulse rate in the study of pneumonic fever. Gibson pointed out some few years ago, that a systolic blood pressure expressed in m.m. of mercury which fell below the pulse rate expressed in beats per minute, argues for an unfavorable outlook. This rule he stated was true in 70 per cent. of cases in which it occurred. The writer has watched this factor in a series of two hundred cases or more and finds it true in 60 per cent. of those showing such relations. Hence its prognostic value.

Personally I know of no other method which is more valuable to tell one when to stimulate, how much to stimulate, and when to reduce or modify stimulation than this observation, and it must be granted that they are important factors in the treatment of pneumonia. In the average case of pneumonia, not requiring stimulation, the blood pressure as expressed in m.m. of Hgs. will be well above the pulse rate expressed in beats per minute throughout the course of the disease, but just as soon as these two factors approximate each other, it is a signal for stimulation, and if the systolic blood pressure falls below the pulse rate, as expressed, it is evidence for vigorous stimulation, and many times I have taken blood pressure every three hours in this stage to watch the stimulating effect of the remedy, for good or bad.

A diastolic reading in pneumonia is valuable. I have frequently seen one of the earliest signs of cardiac failure in pneumonia to be a lowering of the pulse pressure; this argues for true cardiac failure in such a type of case, and calls for a certain class of cardiac stimulant as camphorated oil or digitalis. Again in certain cases there will be a marked increase in the pulse pressure due to a lowering diastolic pressure, this being the result of a vaso-motor paresis. It is

usually associated with marked toxic manifestations and abdominal symptoms as the result of this paretic state of vaso-motor system. In this type it is not primarily the heart that succumbs, but it is a heart trying to maintain functions of the various organs against a low blood pressure. With such a picture of vaso-motor paresis, a different type of stimulant is useful, as adrenalin and pituitrin.

A second useful factor to the general practitioner in study of blood pressure is the estimation of the cardiac force, and the cardiac load, or what is termed heart force, and heart load.

The cardiac force as worked out by competent observers may be expressed by dividing the pulse pressure by the systolic pressure, or SP=normally 25% to 35%; this indicates to a certain degree the efficiency of the heart as a pump. This is not always as reliable as one would judge, for in certain conditions associated with a rapid heart, a low pulse pressure may be found, and yet the heart be competent. It is important to know the efficiency as a pump, but what is paramount, is what load the heart is carrying when at rest, or during the diastolic period. This heart load may be arrived at by dividing the pulse pressure by the diastolic pressure, or DP=which normally is 50%, with limitations of 40 to 60; in other words the pulse pressure should approximately be one-half of the diastolic pressure. In the study of a series of normal cases this ratio will be found to hold true.

As a result of investigations in the study of cardio-vascular changes, four groups have been recognized:

1. *Hypertension, with cerebral or renal manifestations.* In this type we have a high systolic and high diastolic, the systolic ranging above the 200 mark, and diastolic about 130. The heart load about 51%. This type evidences headache, dizziness, various disturbed sensations and even convulsions. Often looked upon as uraemic, but in fact purely the result of a cerebral sclerosis. The urinary examination in this class of cases is often disappointing, in not finding marked evidence of kidney change.

2. *Hypertension with cardiac disease.* The pressure is moderately high. Systolic, 180 average; diastolic, 90 or so, evidencing a heart load of 95 to 100. This class usually manifests few if any symptoms, except when the heart is called upon for increased work over a prolonged period, when symptoms will evidence themselves. This increased pressure and

heart load is the result of hypertrophy, and as long as a patient keeps within his limitation he is comfortable. It tells us that such a heart is working to its limitations, and that any strain is liable to develop decompensation. A falling systolic pressure in this group is of evil omen and denotes beginning dilatation.

3. *Myocardial and valvular disease without hypertension, evidencing an increased heart load.* The systolic pressure here is usually low, ranges from 110 to 115, with an approximate diastolic pressure of 60 or so, evidencing a heart load of 85% or more. This class will evidence the beginning manifestation of decompensation, as dyspnoea, cough, oedema, etc., and calls for appropriate treatment.

4. *Myocardial and valvular disease with decreased load.* Here the systolic pressure is usually as in class 3, 115 to 120, but the diastolic pressure is higher, about 90 or thereabouts, showing a decreased pulse pressure and a decreased heart load of 28 to 30%. Such a heart is in the late stages of decompensation, and all of the clinical manifestations that accompany that stage.

In both class 3 and 4, when they respond to treatment, it is remarkable to see the declining symptoms, as the heart load in one decreases to the 50 mark, and that of the other, class 4, increases to the 50 mark. As long as this ratio is maintained and held our patient will be comfortable, and if a return of the former manifestations show themselves, a disturbance of the heart load should be suspected. By a study of heart load, it can be seen that it is valuable from a therapeutic standpoint as to whether treatment is efficient, when to modify or change our stimulation, and also as a prognostic factor.

A study of blood pressure is valuable in the approximate estimation of the functional power of the heart. The paramount question in any cardiac condition, whether primary or secondary, is what that heart is capable of doing. At present this end can best be obtained by studying the effect of an increased amount of work upon the blood pressure. By its means we are enabled to obtain an approximate idea as to the field of response or reserve power of the heart, in normal and diseased conditions and make comparisons.

This estimation needs only the sphygmomanometer. The pulse rate, systolic, diastolic and pulse pressures are recorded

for the individual to be examined. Following this a certain amount of work is done, as hopping 50 or 100 times, or having the patient stand erect, hands and arms extended and bend double 10 to 15 times, without bending the knees, or stair climbing. These methods are all efficient, but the same type of exercise should be used at each subsequent examination for comparison. After this exercise the pulse rate, systolic, diastolic and pulse pressures are recorded every two minutes.

In the normal subject following exercise there is an acceleration of the pulse rate, and an increase in systolic, diastolic and pulse pressures. During the period of rest the pulse quickly returns to normal—that is, within one or two minutes—but the blood pressures will continue to rise, maintain their ratio, and decline to normal in four to eight minutes. This has been termed the normal Ehrolung, or reaction.

In diseased conditions, where the heart function has been impaired as the result of cardiac disease, or due to secondary changes as result of other primary conditions, either of acute or chronic nature; one will find following this measured amount of work, a rapid rise of pulse, the blood pressures instead of rising will show little or no increase, or in those cases where field of response is markedly involved, there will be a decrease of blood pressure below the normal for the individual, with a lessening of the pulse pressure, this drop in blood pressure taking at times from twenty to thirty minutes to return to normal. It is not uncommon to have an original normal systolic pressure, ratio, and pulse rate, before the work test is undertaken and find such a reaction as stated above.

This reaction as outlined is extremely valuable in determining to what extent or degree a heart has been damaged, as the result of acute disease of the heart. Its greatest value is in those cases of chronic myocardial changes, associated with vascular and renal changes. In fact, the writer has come to the conclusion that this contraction of the field of response of the heart, as evidenced by the above reaction, is one of the earliest signs of myocardial changes.

In closing I wish to state the object of this little discussion is to present to you some clinical facts that would be practical and useful to the general practitioner and one that he might use to advantage in the daily routine of his work. There is but one element that is required; that is time, and I feel that he who will take the time to investigate will say, "It is time well spent."

A PRELIMINARY REPORT OF A CLINICAL STUDY OF THE VALUE OF ACRIFLAVINE IN THE TREATMENT OF GONORRHEA.

BY

LEON T. ASHCRAFT, M.D.,

AND

LIEUTENANT L. A. KENNELL, M.D., U. S. N.,

PHILADELPHIA, PA.

In common with most of the medical profession, we have been inclined to view with skepticism any new remedy or method of treatment that promised to terminate quickly an attack of gonorrhea; but our interest has recently been aroused by an article published in the August issue of the *Journal of Urology* by E. G. Davis and B. E. Harrell, entitled, "Acriflavine in the Treatment of Gonorrhea—An Experimental and Clinical Study," as well as by the reports that some of the patients of one of us (A.), recently returned from service abroad, have given concerning the wonderful effects of the remedy under discussion. Indeed, so enthusiastic were some of these patients that they brought with them a certain amount of it and requested that it be tried. As soon as it was possible to procure from abroad a sufficient quantity of this drug, through an English manufacturer, a series of experiments were instituted with the hope of obtaining as favorable results as those reported in the excellent article already mentioned.

Acriflavine, or diaminomethylacridinium chloride, is a dye claimed by these investigators to owe its particular usefulness in this disease to the following facts: It is nontoxic to the tissues in therapeutic doses; it is only slightly irritating to the mucous membranes in concentrations that inhibit the growth of the gonococcus; it possesses great diffusibility and power of penetration in the tissues; it is a powerful urinary antiseptic, having at least six hundred times the strength of protargol, and inhibiting the growth of the gonococcus in a dilution as low as 1:300,000; and it has an affinity for pus cells, and is thus enabled to destroy intracellular organisms. In order that the chances for a successful result following its use should be the best, it was thought that

the treatment should be carried out, if possible, amid surroundings that would insure the patients' being kept from exposure to the evil consequences of sexual intercourse and alcoholic indulgence. Accordingly, it occurred to one of us (A.) that these experiments could be most successfully undertaken at the League Island Navy Yard, where the conditions desired are most admirably fulfilled. Permission having been obtained through the courtesy of Commander Smith, a study of a number of cases among the men there was made by us. These cases, together with a few others among civilians referred to us through the courtesy of Dr. Joseph Hunter Smith, of Philadelphia, form the basis of our findings.

In all, 67 cases were treated, of which 22 were acute, and 45 chronic. Among the acute cases appearing for treatment, the following complications were observed: In one case, lymphangitis and lymphadenitis, no treatment being given: and in one case, polyarticular rheumatism, this case being now under treatment. The value of the drug in the latter case is as yet undetermined.

Of the chronic cases, 28 had had a number of previous attacks, covering a period of several years; while 17 were in the chronic stage of the original acute attack. A few of the chronic cases showed complications when first appearing for treatment. Three showed a very small meatus; 8, stricture; 5, chronic epididymitis and vesiculitis. All had varying degrees of prostatic involvement, in many of which the Neisser organisms could be demonstrated. In those presenting such complications as congenital narrowing, organic stricture and chronic epididymitis, even though the drug controlled the discharge, we considered it but fair to avoid commenting upon its value, for obvious reasons.

In 17 of the 67 cases, the fact that complications existed renders it impossible for us to make use of them in tabulating our results. The remaining fifty constitute the basis for our conclusions.

The technique that we employed is the one usually employed for urethral injections, except that these injections were given by us or under our direction to the patients, and not self-administered. From 5 to 10 c.c. of acriflavine, in solutions varying in strength from 1:500 to 1:1,000, was injected, the stronger solutions being employed in the more recent and acute cases, while the weaker ones were used in the

cases that were more advanced. Three injections a day were given in cases of anterior urethritis. In addition, in those in which there was posterior urethritis, the solution was directed to that region; and when prostatic involvement complicated the condition, 25 c.c. of a 1:1,000 solution was first injected into the bladder, and the prostate was then massaged. This procedure was repeated every second day until it was no longer necessary, the daily anterior injections being continued in the meantime.

Most of the patients complained of burning following the injections—some, of course, more than others. This was particularly noticeable in the cases in which the strength of the solution was 1:500, and in those whose urine presented an acid reaction. As a rule, however, the treatment was so well received that the "Jackies" around the dispensary clamored for the new treatment. It was also noted by one of us (K.) that the treatment was more effective in the presence of an alkaline reaction of the urine. In order to secure alkalinity, sodium citrate was administered.

Among the complications noted were the following: retention, which occurred in two cases, following the injection of 1:1,000 solution for prostatic involvement; folliculitis, which occurred in one case after the third injection for acute gonorrhea; and hyperacute posterior involvement, which also occurred in one case.

The clinical results observed were a rapid subsidence of the discharge after a number of injections, and, in some instances, even after one or two; and a disappearance of the usual well-known symptoms of the disease. Microscopically, a rapid disappearance of the gonococci was noticed. These observations obtained even in the cases of acute posterior urethritis.

Many cases that had failed to be relieved as the result of the employment of the methods of treatment now in vogue seemed to respond favorably to the new method; and in the chronic cases not presenting the complications previously referred to, the results were equally good. The most brilliant results, however, were apparently secured in the acute cases. Nevertheless, the therapeutic usefulness of the drug in the chronic cases was proportionate in value. In fact, we are almost compelled to believe that our findings are too good to be true.

There were three chronic cases in which a continuance of the injections produced a purulent discharge, although no Neisser organisms were present. Stopping the injections cleared up these cases.

In one case treated abroad, and subsequently coming to us, it was claimed that at one time all the gonococci had disappeared under the use of acriflavine, yet the discontinuance of the treatment had been followed by an acute discharge. Here, many intracellular organisms were found, the condition yielding to further treatment with acriflavine.

To be sure, in considering our work, the criticism might be justly made, perhaps, that a sufficient time has not elapsed between the subsidence of the discharge and the reporting of the cases; since these experiments were only commenced during the first week of March. It may, however, be said that nothing has occurred that would lead us to change our view concerning the value of the drug. The investigation will, of course, be continued, and a subsequent report made.

Space will not permit of a detailed report of each of these cases, but we append a few case reports, which are typical of each of the various classes of cases treated. To give more would be a practical repetition of the ones here presented.

CASE HISTORIES—ABORTIVE CASE.

CASE 1. The patient reported on the same day that the discharge had commenced, and intracellular diplococci were found. 5 c.c. of a 1:500 solution of acriflavine was injected three times a day. On the second day, the discharge was thinner and contained no organisms. The first glass was but slightly cloudy. On the third day, there was only a watery discharge, with no organisms. Treatment was then discontinued. On the fourth day, no discharge was present and the urine was clear. The patient has remained well. Duration of the treatment, three days.

ACUTE CASES.

CASE 2. The patient reported for treatment with a urethral discharge, which had begun the day before, following an exposure that had occurred eight days previously. On examination, the discharge was found to be profuse and

creamy, and to contain large numbers of pus cells encasing diplococci. The first glass was cloudy, and the second clear.

Acriflavine, 1:500, was given, 5 c.c. in the anterior urethra, three injections daily. On the second day of the treatment, no organisms could be found in the discharge; but on the third day, the discharge contained a few extracellular diplococci and many disintegrated pus cells. On the fourth day there was only a slight moisture of the meatus, with no diplococci in the discharge. The first glass contained a few shreds, and the second was clear.

The patient complained of smarting following the injections for the first two days. On the fourth day, an injection of 1:1,000 solution was given. Five days later (on the ninth day), he was examined by massaging the prostate, securing a slight, thin, mucoid discharge. In this, no cocci could be found. Both glasses of urine were clear. Duration of treatment, five days.

Case 3. The patient reported for the first time with a one-day old, creamy discharge, containing large numbers of extracellular and intracellular diplococci. 5 c.c. of the 1:500 solution was injected three times daily. On the second day, no discharge was present. The first glass was slightly cloudy, with shreds. On the third day, no discharge was found. The first glass was clear, with shreds; the second glass, clear. On the fourth day, there was no discharge. The first glass was clear, with shreds. On the fifth day, no discharge was found. The first glass was clear, with shreds; the second glass was clear. On the sixth day, there was no discharge; and both glasses were clear. Treatment was stopped, and the patient has remained well. Duration of treatment, five days.

Case 4. The patient reported with a discharge that had lasted one day. It was found to contain extra- and intracellular diplococci. The first glass was cloudy; the second, clear. We injected 5 c.c. of a 1:500 solution three times a day. On the second day, the discharge, smear and glasses were the same as on the previous day. On the third day, the conditions were about the same. On the fifth day, the smears showed extracellular diplococci and a few disintegrated pus cells. The first glass was slightly cloudy, with shreds. 10 c.c. of 1:1,000 solution was injected three times a day. The same treatment was continued for two days longer. On the eighth day, the smear showed both extracellular and intracellular

diplococci, with a few formed and disintegrated pus cells. The first glass was cloudy, with shreds; and the second glass, clear. On the tenth day, a very thin, viscid discharge was present. Slides showed a few extracellular diplococci. Two injections only were given. On the eleventh day, the discharge was the same. A smear showed only a few epithelial cells. Only one injection was given. On the twelfth day, the meatus was moist. No organisms were present, but a few pus cells were found. One injection was given. On the thirteenth day there was no discharge of any kind, and the urine was clear. Treatment was discontinued and the patient has since remained well. Duration of treatment, twelve days.

Case 5. The man reported with a discharge three days old. The smear showed intra- and extracellular diplococci. The first glass was cloudy; the second clear. 5 c.c. of a 1:500 solution was administered three times a day. Because of the clinical conditions, treatment was continued for three days. After this, the discharge became much less, the smear showing but a few extra- and intracellular diplococci and disintegrated pus cells. The injections were continued. On the morning of the fifth day, there was only a drop, which contained intracellular diplococci and a few formed and broken cells. The first glass was cloudy; the second, clear. On the sixth day, a thin, scanty discharge was present in the early morning, the smear showing only a few extracellular diplococci and disintegrated pus cells. The strength of the solution was now changed, 10 c.c. of the 1:1,000 solution being given twice daily, and continued for four more days, at the conclusion of which, on the eleventh day, he was pronounced cured. Duration of treatment, ten days.

ACUTE COMPLICATED CASES.

Case 6. The patient presented himself on the second day of a discharge showing many intracellular organisms. The first glass was cloudy; the second, clear. Injections of 10 c.c. of a 1:500 solution were given three times daily. On the second day, the discharge was distinctly less. On the third day, the patient complained of distress near the meatus and fossa navicularis. Palpation revealed a small, pea-sized nodule. Local treatment was, accordingly, discontinued. This

follicle, however, went on to active suppuration, and had to be incised. The case is still under treatment.

Case 7. The patient reported with a profuse discharge and involvement of the left epididymis. He was placed in bed and treated according to the accepted method. Six days later, the epididymitis had largely subsided. He was then given one injection of 10 c.c. of a 1:1,000 solution posteriorly. On the following day (eighth), the discharge had ceased but these injections were continued for six days more. On the following day, the smears made from the prostatic massage showed no diplococci and only a few disintegrated pus cells and epithelial cells. On the next day, there was no discharge from the meatus, and both glasses of urine were clear. There was no soreness of the epididymis. The symptoms have subsided entirely, and the treatment has been discontinued. Duration of treatment, fifteen days.

CHRONIC CASES.

Case 8. The patient presented himself with a gleety discharge. He had had three previous attacks of urethritis. Massage of the prostate and vesicles produced a creamy discharge, containing extra- and intracellular gonococci. Both glasses contained shreds. 25 c.c. of a 1:1,000 solution was injected. On the second day, there was no discharge. The same treatment was, however, repeated for four days. The treatment was then discontinued. Three days later, the urine was clear, and massage of the prostate and vesicles failed to show any Neisser organisms. Apparently this case is clinically cured. Duration of treatment, five days.

Case 9. The patient had had an attack of gonorrhea three years before, which had lasted for two months. He reported for treatment with an apparent return of his old condition, as he had had no intercourse for two weeks previously. There was a profuse, creamy discharge, containing extra- and intracellular diplococci, masses of staphylococci, and both formed and disintegrated pus cells. Both glasses were cloudy. Injections of 5 c.c. of a 1:1,000 solution were given twice daily. On the fifth day, the discharge was found to be scanty and to be present only in the morning; and the smear showed no gonococci, but large numbers of disintegrated pus cells. Both glasses were slightly cloudy. On the sixth day, the dis-

charge was present on arising only, and was very thin. The smear was unsatisfactory. On the eighth day, no discharge was present; but prostatic massage produced a small drop of pus, in which a few extracellular diplococci were found, with many disintegrated pus cells. Both glasses were still slightly cloudy. On the tenth day, 10 c.c. of the solution was injected. On the eleventh day there was secured by prostatic massage a thin smear, which contained no gonococci, but a few disintegrated pus cells. Both glasses had a faint haze, which was determined to be due to phosphates. 25 c.c. of the 1:1,000 solution was injected with the bladder empty, and the prostate afterwards massaged. On the twelfth day, there was no discharge. A few shreds were present in the first glass; the second was clear. Sounds Nos. 22 and 24 were passed, and there was no discharge afterwards. The patient went home on the fifteenth day, there being no discharge, and the urine being clear except for a few very small shreds in the first glass. Duration of treatment, twelve days.

Case 10. The patient had been treated by the usual methods for the past three months. There was a scant discharge, containing extracellular and intracellular diplococci, and formed and broken pus cells. The first glass was cloudy, with pus; the second, shreddy. 10 c.c of a 1:500 solution was injected posteriorly. On the second day, there was a scanty discharge. No smear was taken. A similar injection was given, and the prostate massaged; and on the same evening, another injection of 5 c.c. of the 1:1,000 solution was given in the anterior urethra. On the third day, a smear was obtained by light pressure on the prostate. It was thin, and contained no diplococci and only a few disintegrated pus cells. 10 c.c. of the solution was injected morning and evening. On the fourth day, there was no discharge. Sounds produced a slight inflammatory discharge later in the day. On the fifth day, there was no discharge; both glasses contained a few shreds. The smear obtained by massage of the prostate contained no diplococci, but some formed and disintegrated pus cells. 15 c.c. of the 1:1,000 solution was injected. On the seventh day, no discharge was found. There were a few shreds in the first glass: the second was clear. The patient was discharged. Duration of treatment, 5 days.

Case 11. This patient had been treated in the hospital by the usual methods for the past six weeks, but the discharge

had returned. Many intracellular organisms were found, both in the discharge and in the material obtained through prostatic massage. 25 c.c of 1:1,000 solution was introduced posteriorly. On the following day there was no discharge, and both glasses were clear. The treatment was continued. On the third day, no discharge was present. Smears from the prostatic fluid were negative for diplococci. Only a few epithelial cells were present. Both glasses were clear. On the sixth day, there was no discharge and the urine was clear. Duration of treatment, 3 days.

Detection of Syphilis by Examination of the Mouth.—Railiet (*Paris Medical*) has made an extensive clinical study covering the above subject. Examining 103 men, nearly all between the ages of 35 and 46 years, for oral evidences of syphilis such as leucoplakia, hypertrophy of the buccolabial glands, the mammillary eminence on the internal aspect of the first upper molars, emphasized by Sabouraud, and the folded or fissured tongue surface, recognized by Gaucher as a sign of acquired or inherited syphilis, Railliet found one or more of these signs in no less than 76 of the series, only 27 men being completely free of them. In 49 men but one sign was present, while in 28 two or more of the signs were variously combined. The mammillary eminence was present alone in two subjects; folded or fissured tongue alone in 17; leucoplakia in 22 and hypertrophy of the buccolabial glands in 8. In general, these lesions were not more pronounced when combined than when present singly. Incidentally noticed in occasional cases where a congenital perforation of the vault of the palate, septal deviation in two cases, nocturnal headache in one patient, and a papilloma of the left commissure with enlarged glands in one instance. Enlarged epitrochlears, however, were in no instance met with. Expressed in percentage figures, leucoplakia was present in no less than 42.8% of all men examined. Fournier ascribes 90 to 95 per cent. of all cases of leucoplakia to syphilis. In the present series leucoplakia coexisted with the mammillary eminence in four cases; with the folded tongue in eleven; and with the fissured tongue in seven. The mammillary eminence was observed in 38.09% of all the subjects, the folded or fissured tongue in 36.89% and the enlarged buccolabial gland in 14.56%. According to these figures nearly one-half of the men examined were slightly or markedly tainted with syphilis. To be sure, in many instances the infection was present only in a highly attenuated form, many of the men examined declaring themselves to be fathers of healthy children born at term.—*American Journal of Syphilis*, January, 1919.

Diabetes Insipidus Treated with Pituitrin.—Drs. Beck and McLean have treated a case of diabetes insipidus by the administration of pituitrinary preparations. The particular one which was the most efficient was pituitrin demonstrated hypodermically. This remedy produced a most remarkable diminution in the daily quantity of urine. The X-ray examination was suggestive of hypophyseal disease.—*Therapeutic Gazette*, March 15, 1919.

EDITORIAL

THE RECENT STATE BOARD EXAMINATIONS.

The Pennsylvania State Board for Medical Licensure has done so much good work and has administered its affairs with such good judgment that it is with the greatest regret that we feel forced to criticise its recent examination editorially. Its chairman, Dr. Baldy, has shown remarkable executive ability in handling all matters relating to the drugless cults. His various rulings respecting hospital administration have in the past and will continue in the future to bring these institutions up to a degree of efficiency that cannot be surpassed by the hospitals of any other State. The examinations of the board have always been conducted fairly, the questions propounded have been such that none but the captious could criticize.

It was with considerable surprise, therefore, that we learned that not one of the homœopathic students had passed the recent examination in practice, materia medica and therapeutics, hygiene and preventive medicine. When, however, we came to look at the questions the failures received adequate explanation.

Q. 4. "Give the dose of phenyl salicylate. In what general conditions is it indicated and what chemical action takes place when it reaches the intestinal tract?"

This question savors somewhat of the "catch" type. Phenyl salicylate is practically always spoken of as salol. Of course the name given in the question is the correct one technically. It is made up of sixty parts of salicylic acid, and forty of phenol, and is decomposed by the pancreatic juice into these two substances. For this reason overdoses are capable of producing phenol poisoning. It is perfectly proper that the board should expect practitioners to know the dangers of salol when administered ignorantly. On the other hand, salol as a remedy, is so problematical in its value that very few intelligent physicians of today prescribe it at all. It does not contain sufficient salicylic acid to make it efficient in the

treatment of rheumatism without the administration at the same time of a dangerous dose of phenol. We have repeatedly warned our students concerning this fact and have gone so far as to say that salol should not be given under any circumstances for anything; as any good it might do could be accomplished by the salicylate or phenol singly. As an intestinal antiseptic it seems to be considerably in vogue and has the sanction it is true, of very high authorities. At the same time we all know that the majority of orthodox practitioners recognize the futility of all attempts at sterilizing the intestinal canal.

Q. 5. "What is the therapeutic value of the following named acids: Acidum hydrochloricum dilutum; Acidum lacticum; Acidum phosphoricum dilutum; Acidum hydrocyanicum dilutum; Acidum salicylicum?"

(a) *Acidum hydrochloricum dilutum* is a drug very much used by the old school in the treatment of gastric conditions characterized by anacidity. The doses ordinarily recommended range from five to twenty minims. As to whether it is ever of the slightest value to the sick, we have very grave doubts indeed. The small doses usually recommended fall far below the quantity normally secreted by the stomach. Physiology tells us that its administration cannot by any possibility atone for the deficiency of the normal gastric juices. This matter was carefully taken up in Boston several years ago, and the conclusion was reached that hydrochloric acid as ordinarily given and advocated by practitioners, was nothing more than a placebo.

(*b*) *Lactic acid* as an internal remedy must be well nigh to useless, for there are a number of excellent materia medicas that do not accord it the honor of a mere mention. What greater contempt can we show for a remedy than by ignoring it?

(*c*) *Phosphoric acid.*—We have no idea what the board was thinking about when it asked this question. Certainly there must be many more remedies, knowledge of which is of greater importance to the sick or to the physicians. Perhaps the board wished to learn from students the fact that their knowledge of these various drugs mentioned was so thorough that they considered them useless constituents of the materia medica. Hare says of phosphoric acid: "It is widely employed in the dose of 20 minims to 1 drachm (1.3—4.0), as a tonic and gastric stimulant. It is not a food to the nerv-

ous system, does not resemble phosphorus in its physiological action, and is not to be employed in its place. It does good in nervous exhaustion simply by stimulating the stomach and thereby aiding that organ in the digestion of food."

(*d*) *Hydrocyanic acid.*—This drug we find to be recommended in the old school materia medica for gastralgia of purely nervous origin, "in some cases of nervous vomiting, and in irritable stomach, where, owing to hyperaesthesia of mucous membranes, the taking of food produces discomfort." How nonsensical! Does not every scientific practitioner of the present day recognize that purely nervous gastralgia is practically non-existant? Is it not true that many, very many indeed, of the violent sudden appearing abdominal pains are due to appendicitis, cholecystitis, gastric ulcer and perforation of internal viscera? Do not the practitioners of today recognize that the fetiches of the past, gastralgia, nephralgia, enteralgia, and algias without number, are merely diagnostic makeshifts which have led to the neglect of proper surgical measures at a sufficiently early period to save life?

For irritable coughs, hydrocyanic acid is prescribed by both schools of medicine.

(*e*) *Acidum salicylicum.*—The various salicylic acid compounds are so much more useful than the acid itself that the latter has become almost obsolete in practice, or if it is not, it should be.

Question eight asks for prescriptions for whooping cough and haemoptysis. As if any kind of an answer was possible to either of these questions. Each of these conditions requires a treatment that will vary according to the patient as well as according to the symptoms that demand relief. Specific medication is not possible in these conditions. We know that there are practitioners who do not agree with us, nevertheless, we feel that our reasoning in the matter is sound.

So good has been the Pennsylvania board in the past we feel that their recent examination exploit may well be compared to a freckle on the face of Venus.

In the June examinations the question was asked, "Give the treatment of sciatica." We do not know what sciatica is and we do not know how to treat it and we are proud of our ignorance. For further information as to sciatica the reader is referred to the lecture on that subject by Thos. McCrae in the last issue of *Medical Clinics of North America.*

In response to criticisms of the examination, the Chairman of the Board has given a reply which all must regard as satisfactory as showing that no spirit of unfairness was intended, and in view of its previous record we feel that the reply is sincere. We would feel constrained, therefore, to avoid discussion of the entire matter editorially, were it not that there is a growing disposition over the entire country to propound questions which while not intended to be unfair, are at least an undue strain upon the possibilities of the medical student to acquire knowledge for their solution. These questions may be divided into two classes, as follows: (1) The archaic; and (2) the new and untried. In the first class is a question asked some time ago by one board, namely, the description of hectic fever. Now this question is certainly one that all the old physicians and many of the laity can answer off hand; but it is now seldom discussed in medical colleges. New and untried subjects are really debarred, and are asked, as a rule, under thoughtless impulse and almost invariably by thoroughly honest men. Questions should be limited to fundamental principles or facts, and we believe should be framed to demonstrate the students' capabilities for applying those facts in practice. If remedies or medicines come within the scope of an examination, those selected for the purpose should be in common use and well recognized. To ask the medical student, for example, the indications for aethusa cynapium would be manifestly unfair.

Again we believe that so far as possible questions should relate to matters which all physicians should carry in their heads, and with which they should be conversant at every possible angle of view. For example, we have repeatedly told our students that he who did not know the cardinal symptoms of trumatic meningeal haemorrhage was not fit to practice medicine. Also we believe that men should know the difference between the symptoms of intestinal perforation in typhoid fever and those of the ensuing peritonitis. Textbooks are too apt to give the latter as authoritative of the former, and the error dies hard.

On the other hand, all matters concerning which in actual practice the physician has the time to "study up" without detriment to his clients should not be subjects for examination, mainly because there is an abundance of far more important inquisitorial material.

We have always been opposed to questions answerable by the vertical parallel columns, *e. g.*, as in differential diagnostic tables. Most material of this kind is too dogmatic and too often fails the physician in actual practice.

On the other hand, we are strongly in favor of questions covering the cardinal features of all the important and many of the unimportant clinical conditions. Interstitial nephritis is a disease the symptomatology of which is kaleidoscopic, but its cardinal features are few and decisive.

Again we feel that every candidate before a state board should be able to make a good clinical examination and show ability to record same in logical style. Indeed we would be surprised if a man who shows ability to examine, record and discuss a case intelligently requires any additional test of his ability.

Unfortunately, examinations cannot always be accepted as complete evidence of the student's ability. All that we can say of them is that they happen to be the only means that human ingenuity has so far devised that can be utilized as a standard of fitness.

THE PENNSYLVANIA OSTEOPATHIC BILL.

THERE is at present a bill before the Pennsylvania Legislature providing that hereafter osteopathic physicians shall be accorded the privilege and right to prescribe medicines and perform surgical operations just as are the fully educated members of the regular schools of medicine. At present osteopathic physicians are required to spend three or four years in their medical education; and the preliminary requirements for admission to their colleges are below those now demanded by the Board of Medical Licensure and the laws of our State for the full fledged graduates of medicine.

Such a measure as that proposed is in the highest degree dangerous to the welfare of the community. With much labor and after many years of hard work, the educational qualifications of physicians have been brought to a high standard. Some indeed question if the entrance requirements have not been made too severe. In addition to a high school education, the medical student must have two years of preliminary college training in certain branches; following which he

spends four years in medical work at college, and finally takes an interneship in an approved hospital for an additional year. In other words, he must spend seven years in medical study.

It is now proposed that a new and less adequately prepared class of physicians be legalized. Under the guise of alleged liberty of thought, etc., it is proposed that a certain class of physicians now permitted to practice within a limited range, shall be accorded the fullest privileges. To state the facts clearly is to show the danger of the new bill. It simply means that osteopathic colleges everywhere will be made an easy means of entrance to the medical profession, where physicians will be ground out quickly. With such easy methods of entrance into medical practice, it is not a difficult matter to prophesy the future. Pennsylvania will be overrun not by osteopaths, but by a horde of poorly qualified practitioners.

Our objections here recorded are not to the osteopaths as a class but to the passage of lax laws governing medical practice. If the osteopath is really desirous of raising his professional status, let him insist that his colleges shall have the preliminary requirements for entrance as demanded by the Association of American Medical Colleges; let him insist that the curriculum of the colleges shall be equal to those of the best; and let him insist that the graduates thereof shall take an interne year; and when he does this, he will have elevated the dignity of osteopathy in its position in the medical world. To create a class of so-called osteopaths which shall be composed in part of a lot of educational riff-raff not eligible mentally or educationally to medical colleges, will lower that school of practice to a standard from which it cannot hope to break away.

The bill is a bad one for the community, and is bound to break up osteopathy as a special field of practice, and its organization will surely die.

THE PREVENTION OF TUBERCULOSIS.

For many years the subject of the prevention of tuberculosis has engrossed the attention of the public to an extent not surpassed by any other topic of public health. This general interest in so vital a subject cannot be entirely attributed to the fact that tuberculosis is a common disease and that it is universally dreaded. Much credit is due to the campaigns

of education which various Boards of Health and other public health agencies have so successfully waged. These campaigns have been successful because they reached the public. They were intelligently planned and were conducted in a thorough, business-like manner. Much publicity was often given them by the newspapers and this helped to draw the crowds. The main features of these campaigns were popular talks, graphic charts and exhibits. Technicalities were put aside and plain language used; charts illustrating in a homely but convincing manner the methods of acquiring the contagion, of spreading it, the ravages wrought by the disease, its economic loss to the community as well as the personal suffering resulting from a case of "consumption" and then the remedy, or how to prevent getting the disease—all these facts were presented and explained.

Legislation has also been active in the prevention of tuberculosis. The inspection of factories; the enforcing of anti-spitting ordinances; the abolishing of the common drinking cups, are measures which have brought good results. Much good has resulted from the establishing of State Free Dispensaries for Tuberculosis, where the poor may receive expert medical advice and other aid of a material nature. Early cases can frequently be arrested through proper directions as to their mode of living or through a sojourn in a State sanitarium.

In spite, however, of all this commendable work in the control and cure of pulmonary tuberculosis, it does not go back far enough and does not strike at the root of the trouble. The primary infection in most cases of pulmonary tuberculosis takes place in childhood. Some years ago von Behring advanced the view that the pathological changes occurring in the lungs in a case of consumption are not the evidence of a recent infection of the lungs but the reaction of an organism already partially immune through previous infection.

The infant is particularly susceptible to tuberculosis and an infection at this time of life is usually of the disseminated type and therefore presents the picture of a tubercular meningitis or an acute miliary tuberculosis with predominance of either pulmonary or abdominal symptoms.

As the child grows older its resistance to infection increases and the clinical manifestations become milder. The lesions are usually localized, the lymphatic glands harboring

the bacilli. It is not unlikely that repeated minimal doses of bacilli may induce a certain degree of immunity to further infection, or at least immunize the individual against a general infection. In the majority of instances, however, immunity is only partial and simply prepares the soil for the development of pulmonary tuberculosis when the individual becomes exposed to respiratory infections at a later period of his life.

The percentage of latent tuberculosis among children of apparently good health is strikingly high. Before the discovery of the cutaneous tuberculin test we could only surmise that a child harbored a tubercular infection. Thus only could we explain and account for the sudden development of active tuberculosis in a child previously in apparent health, after an attack of measles or whooping-cough or a sudden breakdown during adolescence incidental to overwork in school or in factories or resulting from unhygienic surroundings, insufficient food, dissipation, etc.

One fact, however, is indisputable, although there has been academic controversy even here, namely, that infection by way of the respiratory route holds good for children as well as for adults. Infection through the alimentary tract, while it does occur at times, is rare when compared to primary respiratory infection. The infant is infected from its tubercular mother or father through the carelessness of the parent. The close contact of mother and child account for the high percentage of infections during the first year of life.

C. S. R.

THE ASBURY PARK MEETING OF THE AMERICAN INSTITUTE OF HOMOEOPATHY.

Go to the next meeting—the Asbury Park meeting—of the American Institute of Homœopathy. You have probably missed many meetings in recent years, which has been your loss and also the Institute's loss. This is your opportunity to make good a long neglected obligation. Don't waste time stopping to think of objections—put them aside heroically and study up a lot of worth-while suggestions for the good of your Institute and your profession. Make it a point to attend all the sessions and after your suggestions have been well thought out, work them in whenever and wherever you can do so

successfully. This is a duty *you* owe homœopathy and the Institute.

For years, ever since you have been practicing medicine, you have been enjoying the protecting and fostering care of the American Institute of Homœopathy. Whether you realized and acknowledged this fact does not matter. The Institute has been a great service and protection to every practitioner of homœopathy. Now it is your turn and opportunity to do something for the Institute. The least you can do is to join the Institute at once and attend its sessions and meetings regularly. Once get the habit and you will never stop, which will be a good thing all around.

The United States Government recognizes the American Institute of Homœopathy as the organized center of our Institutions, the seat of our national authority, and as the mouthpiece of the homœopathic physicians of the United States.

It is up to you to be sure it correctly voices your sentiments. This can only be done by your constant attendance on its sessions and your active participation in the work which properly comes before it. The world hates a slacker. So don't be one at the nineteen-nineteen meeting of your Institute. If you are not a member, now is the proper time for you to become one. Join at once. Write to the secretary, Dr. Sarah M. Hobson, 829 Marshall Field Building, Chicago, Ill. Tell her you want to join. She will promptly mail you an application for membership blank. Fill it up at once and as promptly return it to her. The rest will be attended to for you by the Chicago office. There is no difficulty about joining: all that is needed is *inclination* and some "pep" on your part. Other people are carrying the burden of the profession for you until you join and take up your share of the responsibility. It is a cowardly proposition to let others do for you the things you should do for yourself.

Every man and women in the profession owes a duty to homœopathy to maintain the American Institute of Homœopathy at the highest point of influence and usefulness that it is possible to reach. Everyone joining now, or who maintains in good standing their present membership, acts as a steadying and sustaining influence in the affairs that are vital to homœopathy and her institutions. Join now. Don't wait to be asked or coaxed. Do it of your own free will and accord. Do it joyously and gladsomely as a duty well done.

The call to *you* now is a self-sacrificing service to homœopathy.

One average individual counts but little, but the composite potentialities in the personnel of one thousand new members working in unison with insistence and persistence for the good of our cause, cannot be measured in words, but it will surely help us all to better things and build up new resources and create new opportunities for the advancement and perpetuation of homœopathy, and will surely help each one individually. Let us have faith. Let us keep the faith, and in that faith one and all go to Asbury Park, June 15 to 20, inclusive, and each do our individual part by employing our entire collective strength to any extent that is necessary to make the nineteen-nineteen session the most completely successful one in the history of our Institute.

Remember! Go to the next meeting of the American Institute of Homœopathy, Asbury Park, New Jersey, June 15 to 20, inclusive.

IS IT WORTH WHILE?

"I was having a long talk to one of my colleagues last night, and we were discussing how doubtful we felt as to whether it was worth while continuing to take an active interest in medical affairs. The opinion we came to was that it was a matter of individual temperament. My own opinion is that there can be no half measures. 'Taking an interest' means giving up time, energy, recreation, and even cash. Unless a man is prepared to work on these lines, he had better resign and be done with it.

"Yours, feeling rather stale,
"X. Y. Z."

The above letter reached us a few days ago from one of the leaders of medicine. It typifies in a general way the feelings that every man who takes an interest in public affairs experiences at some time or other during his career. Despondency as to practical results achieved by his efforts, annoyance at the indifference and lack of appreciation of the rank and file, and irritation because of the conservatism of some, and the disloyalty of others, are factors which invariably lead to the heart-searching question: "Is it worth while?"

The ethics of voluntary service presupposes a willingness

to make personal sacrifices. There are compensations, it is true, but these cannot always be tangibly expressed. The hope of reward is not always present to sweeten the labor. Each man knows his own duty best. To some the call to public service is insistent. Every individual more or less possesses some of the characteristics which make for good citizenship. In medicine, in particular, the profession has never lacked men of foresight and character as its leaders. Today quite as much as in the past, the need for leadership of the right sort exists. The best minds of all engaged in the profession should be available and in no sense are they too good to be utilized for the advancement of the cause which every true physician has at heart. But it should not be overlooked that in addition to those excellent qualities already mentioned, patience, persistence, and perseverance are equally important. Time is always on the side of the reformer. Often the steady plodder accomplishes more in the long run than his more brilliant and scholarly colleague. Few reforms are gained without long periods of preparation. Medical history amply illustrates this. How much physicians today owe to the early pioneers for years of faithful service is hard to say. Their deeds live after them, and we know that their memory is both cherished and honored.

Edmund Burke, in "Thoughts on the Cause of Present Discontents," says that, "The man who lives wholly detached from others must be either an angel or a devil. . . . We are born only to be men. We shall do enough if we form ourselves to be good ones. It is therefore our business carefully to cultivate in our minds every sort of generous and honest feeling that belongs to our nature. To model our principles to our duty and our situation . . . and rather to run the risk of falling into faults in a course which leads us to act with effect and energy, than to loiter out our days without blame, without use. Public life is a situation of power and energy; he trespasses against his duty who sleeps upon his watch as well as he that goes over to the enemy."

Burke's eloquence might well act as a guide and stimulus to those who are inclined to falter in their work. The call to service is insistent in the hearts of men. Whether little or much results from their efforts depends to a great extent upon the amount of enthusiasm and energy they give out themselves and inspire in others. No one can truthfully say that service of this kind, faithfully rendered, is not worth while. It would be a thousand pities if because of some temporary discouragement there should be any diminution in the ranks of those to

whom professional service means not merely a perfunctory duty or drudgery, but an exemplification of good citizenship in the performance of which all that is best in them finds thoughtful expression.—*American Journal of Pharmacy.*

The above impressed us so forcibly that we have taken the liberty of transcribing it directly to our pages, the alterations made being a few words to make it fit the medical instead of the pharmaceutical profession. The real worker in professional affairs usually does, because it is his recreation or pleasure. When adversely criticized by his confreres he may feel discouraged, but with the "call of the wild" ever within him, he returns to the professional fray. Too often it is asked, "What does he get out of it?" The answer is, "Much; his principal pleasure." The idea that his action is to be entitled generous is not admissible. If the act is generous or self-sacrificing or labor entailing, it is not performed because of these conditions, but because of plain selfish pleasure. In other words, generosity of this kind is plain selfishness; refined selfishness it is true, for the fondness of doing is at the foundation of the individual active in professional affairs.

Those not in accord with him derive advantage from his labors, for without our organizations, we would be helpless as individuals. All praise therefore be accorded the men active in the organization.

MEDICAL LEGISLATIVE CONFERENCE.

The medical legislative conference of Pennsylvania is a body composed of five physicians appointed by the presidents of the incorporated medical associations of Pennsylvania. The object for the formation of this conference is to devise ways and means to protect the interests of organized medicine in Pennsylvania relative to measures which might be introduced during present and subsequent legislative sessions. The circular issued by the conference makes use of the term "Measures beneficial to the medical profession of the state." In order to work efficiently it is necessary that funds should be contributed by the physicians. The committee therefore asks that *all physicians* of Pennsylvania shall contribute the sum of one dollar, the said money to be used for legislative purposes. We request each of our readers to send one dollar to Dr. E. A. Krusen, Norristown, Pa., at his earliest convenience.

GLEANINGS

EAR, NOSE AND THROAT

Conducted by J. V. F. Clay, M. D.

A Case of Fatal Epistaxis Following Varicella.—C. C. Jones, *Laryngoscope*, Vol. xxlv. Feb., 1919. Colored male age 25 years, during the third week had daily attacks of epistaxis which were controlled by adrenalin spray. On fourth day pain in left ear followed in a few hours by bloody discharge. Wassermann negative; urine negative. Left mastoid became tender. Hemorrhage from nares became very profuse necessitating anterior and posterior packing. This failed to control. Patient developed otitis media in the right ear. Horse serum was given and thromboplastin applied to the mucosa of the nose. Hemorrhage continued for six days when patient died. Autopsy: No meningitis. Pus in the right frontal sinus, infection passing into the right ethmoid and sphenoidal sinus. Mastoid antrum and cells filled with pus on both sides but cell walls were intact. The author's conclusions are: (1) the case was one of temporary hemophilia following varicella; (2) packing in a case of this character is useless; (3) the mastoid and ethmoid infections were secondary to a hemorrhagic condition and had no bearing on it except possibly to aggravate it.

Medical Studies on the "Feel of the Airship." Deaf Mutes and Normals.—Lewis and Dorn, *Laryngoscope*, Vol. xxlv, Feb. 1919. These investigators conducted a very interesting series of experiments upon deaf mutes and normals in actual flights. In order to eliminate the visual influence the subjects were blindfolded. Those with normal inner ears, when blindfolded, were able to detect motion changes during flight, whereas blindfolded deaf mutes with destroyed labyrinths were not. The "feel of the airship" is to the aviator the detection of movement, a highly essential factor to the man who will do stunt flying. These investigators report their experiments upon the healthy and contrast them with results obtained in the deaf mutes and indicate very clearly that the individual who does not possess normal labyrinthine function does not appreciate the sense of movement as does the individual with normal labyrinthine activity. These authors conclude with the statement: "one who shows good responses in the turning chair shows good detection of movement in the air: one who shows poor responses in the turning chair shows poor detection of movement in the air."

Report of a Case of Meningitis Following Operation upon the Middle Turbinate with Autopsy Findings.—Harris, (*Annal Otol., Rhinol., Laryn.*, Dec. 1918). Patient a young male 25 years with a history of injury to nose twelve years previously. Right middle turbinate was removed to improve breathing. Five days after operation, developed symptoms of meningitis and died suddenly. Autopsy: cause of death, pneumococcic meningitis. A profuse exudate noted over the convex surface of the brain more marked on the right. Anterior lobe of the cerebrum was adherent to the cribriform plate of the ethmoid on the right side. A necrotic area was found in the middle of the right cribriform plate and included the dural

coverings making a direct communication between the brain cavity and the nose. The opening in the cribriform plate presented regular smooth appearance suggesting the possibility of a developmental fault. A necrotic area in the ethmoid suggested an extension of the inflammation as an ostitis. Specimen from the spinal fluid showed penumococci type two (atypical). The author's comment is: "There is little question that the perforation in the plate had existed since the time of injury twelve years before. In spite of absence of symptoms there was clearly present an old ethmoiditis, latent in character, associated with a latent meningitis. There was probably a direct communication between the cystic turbinate and the brain. As was stated by one of the surgeons present who saw the case, the slightest shock was sufficient to light up the inflammation. The operation, slight as it was, served as the exciting cause."

SURGERY

Conducted by J. Dean Elliott, M. D.

Pathology of Goiter.—Simpson classifies goiter as: Simple goiter—A. Physiological; B. Toxic. Multiple adenomata—A. Cystic, B. Solid. Colloid goiter. Exophthalmic goiter. Neoplasms. This classification is based upon specimens received at the State Institute for the Study of Malignant Disease, Buffalo, New York, and, as they came from operations, practically all are in the last four classes.

By toxic goiter is meant one due to toxic substances, not one giving rise to symptoms of hyperthyroidism. The two most generally accepted causes being a toxic substance in the water (Bircher) and toxic substances of infectious origin, the chief seat of the infection being in the intestinal tract (McCarrison).

The importance of multiple adenomata has not been recognized, or at least not given its proper place in literature. Usually it is very lightly passed over, yet 65 per cent. of the specimens were of this variety. It is a true tumor, probably springing from the remnants of the ducts when the thyroid was a duct gland, and it is to this variety that many different names have been applied, as cystic, fibrous, hemorrhagic goiter. It is irregular, nodular and thus is differentiated from the other varieties which retain the characteristic lobular form of the gland. It may be cystic or solid, the former resembling the colloid goiter, while the latter may cause toxic symptoms. Three per cent. of enlarged thyroids diagnosed as "exophthalmic goiter" proved to be very cellular adenomata.

In exophthalmic goiter the gland is not usually much enlarged, but there is always a specific pathologic picture of hyperplasia. The cut surface reveals compact, grayish areas without exudate and histologically the alveoli are numerically increased, irregular in shape, lined by several layers of high columnar epithelium with marked tendency to papillary formation.

Neoplasms are mentioned as 4 per cent. of the thyroids received showed malignant disease. Suspicions of malignancy should always be aroused when a goiter in a person past forty suddenly begins to enlarge in size.

In a brief recapitulation the following points were emphasized: The different varieties of enlarged thyroids are characterized by the common factor of increase in size but otherwise differ markedly from one another. They may be differentiated clinically in nearly all cases by careful examination

which seems to be desirable for the selection of proper treatment. The physiological simple goiter is simply a vascular dilatation and is goiter only in the sense of enlarged gland which, however, is often only of temporary duration.

Simple toxic goiter is an enlargement of the thyroid gland due to a symmetrical hyperplasia of all the structures of the thyroid and without clinical evidences of toxic symptoms, most probably caused by toxic factors. This form, which is usually called endemic goiter, is always associated with drinking water which probably has to do with carrying the toxin or infection.

Multiple adenomata is the common cause of enlargement, at least so far as the statistics show, which are, of course, based upon operative material sent into the laboratory. It is a true tumor formation, occurring about the age of puberty. The tumors start as minute adenomata in different parts of the gland and gradually increase in size, causing the nodular form seen later in life and having great tendency to degenerative changes which give this form of enlargement its numerous names. It is well to remember that it may be confused clinically with exophthalmic goiter.

Colloid goiter is simply a passive accumulation of colloid material in the dilated alveoli and is usually considered a healed state of some previous pathological condition of the thyroid gland.

Exophthalmic goiter, even if it be not of primary thyroid origin, has its specific pathognomonic histological picture, and there can be no doubt of the toxic effect of the excessive secretion of this gland.

In 5 per cent. of the specimens there was more than one variety found and this may explain some of the unfavorable operative results. An area of exophthalmic goiter could be left when removing an adenoma or colloid lobe.—*Surg. Gynecology and Obstetrics*, 1919, p. 153.

A Practical Classification of Cutaneous Neoplasms.—After an examination of the ponderous forms of classification invented by the dermatologists and the simpler but more subtle arrangements that pure pathologists have evolved, Van Buren feels that the broadest and most obvious differentiation of skin tumors is the most practical. Using the mistakes between the clinical and microscopic diagnoses of the 353 new-growths of the skin received at the Laboratory of Surgical Pathology, Columbia University, during the last eight or nine years, as a basis, he believes the division into benign or malignant tumors is all that is necessary from a clinical standpoint. Certain growths, as keloids, sebaceous cysts, lipomata and capillary angiomata are definitely benign, but it is impossible to differentiate the benign from the malignant papillomata and fibromata. Even a microscopic examination may not give a correct answer or a tumor that is morphologically benign may change its character. When the two symptoms of greatest value in demonstrating malignancy, rapid enlargement and ulceration, are present, the chances of a permanent cure are very much lessened.

Therefore he makes a strong plea for the early excision of doubtful neoplasms. If they prove to be benign, a source of chronic irritation and a precancerous lesion has been removed.—*Surgery, Gynecology and Obstetrics*, 1919, p. 278.

Are We Justified in Removing a Comparatively Healthy Gall-Bladder?—Magie, in a short paper based upon three hundred operations on the gall-bladder and bile ducts, makes a plea for saving the gall-bladder

in at least the majority of cases. He recognizes that the very best surgeons of this and foreign countries differ in their opinions as to the best routine procedure, cholecystostomy or cholecystectomy. As physiologists and surgeons both recognize that the gall-bladder has a function, Magie believes that this should be conserved whenever possible.

His indications for cholecystostomy are: All cases of acute cholecystitis of only a few days' duration; also some acute cases that have had previous attacks, provided the walls are not much thickened, are free from adhesions that would indicate previous serious disease and that the cystic duct is patent. Bile may be slight in amount in an acute gall-bladder on account of swelling of the cystic duct and yet flow freely within a short time after drainage has been established. All cases of simple cholelithiasis when the gall-bladder shows little signs of ever having been infected and exploration discloses a comparatively healthy mucous membrane. Cholecystectomy should be resorted to: (1) In all cases of hydrops with stricture of the cystic duct; (2) in many cases of acute gangrene or threatened gangrene of the gall-bladder; (3) in all cases complicated with imbedded stones in the cystic duct, with ulceration that would probably cause stricture when healed; (4) in all very thick-walled, fibrous or calcareous degeneration; (5) in cancer when the disease is limited to the gall-bladder.—*Surgery, Gynecology and Obstetrics*, 1919, p. 409.

Tuberculosis of the Appendix.—After a review of the literature upon this subject, Scott reaches the following conclusions: (1) Tuberculous appendicitis occurs more frequently than is generally recognized. About 0.5 per cent. of all appendices removed surgically are tuberculous. (2) There are three forms of the disease, miliary, ulcerative and hyperplastic. The lesion may be primary or secondary to tuberculosis elsewhere in the body. The primary form is extremely rare. (3) The diagnosis rests upon the demonstration of an afternoon temperature, evening sweats and pain and tenderness in the right lower quadrant. (4) The prognosis is unfavorable except in the very rare primary forms of the disease. It is best in the hyperplastic form. (5) The treatment is operative whenever possible. Active pulmonary lesions contra-indicate operation. There is no medical treatment of the lesion in the appendix itself. Hygienic treatment is indicated in active pulmonary conditions associated with tuberculous appendicitis.—*Annals of Surgery*, 1918, p. 648.

Inguinal Hernia in the Male.—Erdman has made a very excellent study of the types, results and sequelæ of 148 hernias operated upon on Dr. E. H. Pool's service at the New York Hospital. The cases were followed from eight to eighteen months after operation. Two deaths occurred among the 120 patients; atrophy of the testicle also occurred twice; nine definite recurrences have taken place; but the most common sequela was permanent, post-operative hydrocele which has followed in twenty cases. These were due to trauma to the tunica during extensive dissection or the presence of congenital or funicular hernia sacs.

The author's conclusions are: (1) That oblique hernias are certainly in the majority of instances of developmental origin; they are more often unilateral, and right-sided; they are often associated with hydrocele of the cord and the tunica; but recurrence is less frequent than with direct hernia. (2) That direct hernias are acquired hernias; are very frequently bilateral;

are not associated with hydrocele but are very prone to recurrence. (3) That in bilateral hernia the sacs on the two sides are nearly always of the same general type, obliques or directs. (4) Hydrocele of either tunica or cord, on the same side as a hernia, will point definitely to the diagnosis of oblique hernia, usually either of the congenital or of the funicular process types. (5) That persistent hydrocele is a common and important after result of oblique hernia operations.—*Annals of Surgery*, 1918, lxvi, p. 702.

MEDICINE

Conducted by Clarence Bartlett, M. D.

The Management of Fever in Pulmonary Tuberculosis.—Dr. H. R. M. Landis contributes a paper bearing the above title. Practically speaking, his only remedy is rest. Years of experience have shown him that it is by rest and rest only that fever is eventually controlled. To him, fever is the one infallible sign of activity of the pathological process. He speaks feelingly against the use of the coal tar derivatives which he contends should never be employed even though they have no depressing effects, as they almost invariably do. While they may control the pyrexia they have no influence whatever upon the underlying pathological changes. Alcohol is another remedy which the older writers recommended as being of service when fever was unduly persistent. He has never seen it do the slightest good. Sponging, while of temporary service, is not needed as an antipyretic, as the flights of fever in pulmonary tuberculosis are almost always evanescent, and require no palliative treatment.

The failure to enforce rest as a remedy, or its lack of appreciation, seems to be dependent upon a lack of knowledge as to the time required to secure results. It is always wise to insist upon rest in bed for ten days to several weeks after the temperature has reached the normal point. Much depends upon the case and the temperament of the patients. As a rule, the milder the fever, the shorter the time for the enforced rest. Burton-Fanning's figures as to the time required in proportion to the pyrexia are as follows:

Between 99.0 and 99.5 —3.6 weeks.
Between 99.6 and 100.0 —5.7 weeks.
Between 100.5 and 101.0 —6.5 weeks.
Between 101.0 and 101.5 —17.5 weeks.

All of the above applies to the cases in which we hope to secure permanent good results. In the advanced case with hectic fever, one is ofttimes obliged to proceed differently. The patient is of course incurable. As a rule rest is to be enforced here, not so much because of the pyrexia, but because the patient feels far more comfortable when in bed. But there are numerous instances in which the physician must consider the temperament of the patient. There are occasions when it is to his advantage to permit him to sit up or even to get dressed. Much must be left to individual judgment after studying the patient.

In prescribing diet, the fever must be forgotten. We are dealing with a wasting disease. Much can be done by building up the patient and increasing his resistance. Loss of weight must be checked. There is no need for following dietetic fads. What is wanted is a liberal supply of wholesome, nourishing food. Three meals a day of an ordinary mixed diet, supplemented

if the loss of weight is marked, by six or eight glasses of milk, will give satisfactory results in the majority of cases. It is necessary, of course, to have recourse to special kinds of food if the patient has a capricious appetite and an uncertain digestion.—*Therapeutic Gazette*, February 15, 1919.

Chlorine in Pneumonia.—Halldorson has treated 72 cases of pneumonia with but one death by the use of chlorine internally. This almost makes us feel that the author either does not know pneumonia when he sees it or that he has been peculiarly fortunate in his class of cases. His prescription is as follows:

Sol. chlori,
Palatol, aa, oz. iv.

Sig.—One half ounce during 3 hours until crisis has passed, when it should be given four times a day before meals and at bed time until health is restored.

The author is very emphatic as to the details as to the preparation of the chlorine. The following is his method for making 16 ounces of chlorine solution:

Sodium chlorate, gr. xl
Ac. hydrochlor., drachms, iij
Aq. destillatae, oz., xvj.

"Place the sodium chlorate in a quart bottle, preferably with a glass stopper; add to this the hydrochloric acid, and let stand without heating for a minute or two until the salt is fairly well dissolved; then remove stopper carefully, and at arm's length, and add about an ounce of water. Now shake vigorously. Keep on alternately adding water and shaking until there are sixteen ounces in the bottle."

If properly made chlorine solution should have a rich olive green color and a strong chlorine odor.

Owing to its disagreeable taste it should be combined. The only satisfactory substances for this purpose have proven to be the lighter extracts of cod liver oil, especially those made by Parke, Davis & Co. and Nelson, Baker & Co. The heavier extracts throw down a precipitate when combined with chlorine solution, and so do all other substances which the author has tried. *Cod liver oil emulsions must not be used.—Therapeutic Gazette*, February 15, 1919.

Rupture of the Mediastinum During Artificial Pneumothorax.—Wilson and Jones report the following case from the New Mexico Cottage Sanatorium, Silver City, New Mexico: A woman with far advanced tuberculosis confined largely to the right side was treated with artificial pneumothorax, receiving injections every three to ten days from November to January. At each operation a small pocket was encountered and small injections produced high positive pressure so that no progress was possible. On January 23, 1918, an injection of air was attempted. About 150 cc. raised the pressure to high positive. A little more was given and a distinct snap was heard by the operator, nurse and patient. This was considered to indicate the breaking of an adhesion, for thereafter 350 cc. additional flowed freely into the chest with greatly reduced pressure. X-ray examination then revealed a small pocket of air on the right with firm adhesions between the lung and diaphragm. A larger pocket of air was to be seen on the left side and undoubtedly there

was a communication between the right and left pleural cavities. The authors give their reasons as to why they consider the case one of air-communication through a ruptured mediastinum rather than one of double spontaneous pneumothorax; and mention that they have been unable to find the record of a similar case in the literature.—*American Review of Tuberculosis*, March, 1919.

The Diagnosis of Acidosis.—After a most painstaking review of the subject, and analyzing all the various methods for determination of the alkali reserve of the blood, including the carbon dioxide tension of the alveolar air, chemical analysis of the blood, etc., Dr. J. J. R. McLeod reaches the conclusion that the simplest of all methods is the best, namely, the administration of bicarbonate of soda by mouth. The technique is that of determining how much can be taken by the organism without causing the urine to assume an alkaline reaction. Under normal conditions 5 grammes daily is sufficient to make the urine alkaline. When the alkali reserve of the blood is depleted, as much as 100 grammes may be taken without causing the urine to become alkaline. Thus we are supplied with a simple and ready test for the acidosis of diabetes.—*Journal of Laboratory and Clinical Medicine*, March, 1919.

NEUROLOGY

Conducted by Weston D. Bayley, M. D.

Lethargic Encephalitis.—Under this caption, Major Pothier communicates an article (*Jour. A. M. A.*, March 8, 1919) from Camp Lee, Petersburg, Va., which may be of interest to the civilian physician, should this peculiar malady break its military bonds and extend into general communities. At once it occurs to one that the title is bad, because it is symptomatico-pathologic and therefore necessarily a tentative term. In fact in the calm reflections of the moment, outside of the turbulent pressure of office hours, I am constrained to widen the enforced limitations of this tentative definition and extend it to cover some of the kindred cases recently seen in civil life. Perhaps in the general psychical unrest of the past few years, in which even quiescent micro-organisms appear to have taken on the unusual belligerency of humans, there are echoes of this condition in private life. We hear of isolated cases of "sleeping sickness," but disseminated encephalitis has been long known, and we are acquainted with its near relation, the encephalic form of poliomyelitis. Yet I am sympathetic with the view of a peculiar microbic unrest, perhaps post influenzal, to explain an unaccountably large number of aetiologically mysterious oculo-motor palsies which have come under my observation since the nightmare days of influenza. However, let the doctor present his observations on eight cases, which he publishes in a preliminary report, and which he studied with painstaking and scientific care. "The commonest features observed . . . are vertigo, diplopia headache, fever, and a spinal fluid showing a definite pleocytosis (from 20 to 66 cells) of the lymphocytic type." "There was one fatal case, and there were no cases of poliomyelitis in the camp." "The eight cases occurred in a comparatively short space of time. They were characterized by a tendency to cranial nerve involvement, fever, and slight changes in the spinal fluid."

The Climacteric Period in the Male.—In the *British Medical Journal*, January 18, 1919, Dr. G. Rankin has made a superficial scratch in the viscera-deep subject of masculine involution. The focal point of this writer is the prostate gland, changes in which he regards as the male equivalent of the ovarian alterations in women. From thence he ceases to be specific, and diverges into a male differentiation—arterio-sclerosis, interstitial nephritis and diabetes in contrast with the changes of women—colitis, rheumatoid arthritis and hyperthyroidism. This is certainly begging the whole question of the clinically observed phenomena of male sexual involution. Arterio-sclerosis, diabetes, nephritis and rheumatoid arthritis know no sex, and the physician who sits in his office and hears the plaints of the male climacteric, if his ear be unstopped, listens to a different story. With the majority of nervously healthy men, the gradual sexual failure is subconsciously accepted without physical or psychical disturbance, and yields gracefully to the other general pressing interests of mature life. When complaint is made, however, it is invariably that of an increasing disparity between the possibility of physical erection, and the stronger psychical persistence of sexual imagination and desire; and it is common observation that in the senile state of neurotics these two related conditions have not a pari passu declination. It is usual for the physical erection to fail long before the sharply disturbing mental concepts of sexual things. Then there may come a resort to the various ultra-physical stimuli through a progression of things from the attractively youthful kept woman down to procedures the physical accomplishment of which require no active sexual initiative on the part of the ancient and antiquated male. In this matter, I take it, the orthodox confessional has nothing on the secret archives of the sanctum sanctorum of a broad-minded physician. The sexual involution of men, with all of its psychological concomitants, is a large and mostly unwritten subject. Even many a normal man in his sexually idealistic concepts, outlives in this respect his more rapidly deteriorating wife, and suffers the persistent desires which she, with her developing or established sexual presbyopia, can no longer visualize. The marriage tie, no longer a bond of mutual desire and satisfaction, then yields to a halter of theologico-religious expediency, superguarded by Mother Grundy, or else is elastically stretched by the male into lines of procedure and relief which only those of radically liberal mind, acquainted with psychology both normal and morbid, can understand and condone.

The Spinal Fluid in Epilepsy.—Larkin and Cornwall have examined the spinal fluid in 146 cases of epilepsy. Their findings presented remarkable variations as to spinal Wassermanns, spinal pressure, cell counts, globulin content, and the Lange and colloidal gold test. Of all the spinal fluid reactions the latter only showed considerable deviation from the normal. Therefore, it would seem that the above investigations have not offered any important suggestions as to the end of epilepsy. At the same time we are forced to admit that the experiments are in a proper direction and should be encouraged. The authors ask the very pertinent question: "Is epilepsy due to some chemical change in the blood increasing its toxicity and thereby inducing the characteristic explosive motor phenomena after the threshold of tolerance is exceeded? Or are the objective phenomena induced by an increased toxicity of the spinal fluid caused by an altered physiology of the cells of the chorioid plexus, meninges or neural parenchyma?"—to which question they quite naturally will have no answer.—*Journal of Laboratory and Clinical Medicine*, March, 1919.

UROLOGY

Conducted by Leon Ashcraft, M. D.

A New Operation to Cure Varicocele.—O. Ivanissevich and H. Gregorini (*Semana Med.*, Buenos Aires, 1918, XXV, 575) consider the present methods of treating varicocele unsurgical and unsatisfactory, because not physiological. As varicocele is more frequently left-sided than right-sided, and as the anterior venous packet is more frequently attacked, intervention may logically be directed to that packet alone. They have devised an operation that removes the essential cause of varicocele and preserves the spermatic, artery funicular and deferential arteries. While they have verified their method experimentally, they have not, as yet, had much opportunity to apply it clinically. It is as follows:

Having noted that the funicular and deferential arteries become incorporated in the vicinity of the internal orifice of the inguinal canal, they operate directly on the spermatic arteriovenous packet which consists of two to four spermatic veins and arteries only, which are easily recognized in that vicinity. An incision is made in the skin and fascia, following the direction of the inguinal orifice. Incision of the obliquus major exposes the cord and its elements. The cord is followed as far as the separations of the vessels mentioned. After isolation from the spermatic veins, these vessels are sectioned after a double ligation. The spermatic packet is thus reduced to the artery and two venous stumps.

Seminal Vesiculography.—H. J. Millstone (*Wisconsin Med. Jour.* 1918, XVII, 146) claims that the vesicleogram gives very definite information concerning the capacity and internal shape of the seminal vesicles, and also shows the presence of foreign bodies, kinks and strictures. It also detects obliteration of the ejaculatory ducts; and by its use, one is able to differentiate a foreign body in the vesicle from ureteral stone and from calcified iliac lymph glands. He does not consider the operations dangerous, if precautions are taken regarding infection, trauma and hemorrhage. He employs sterilization only when definite indications exist. The usual preparation of the patient for an operation having been given, Millstone opens the vas, introduces a needle and injects slowly a ten per cent. solution of collargol, previously warmed, until colic-like pains are felt by the patient in the base of the bladder. The rectum and bladder are both inflated with air, and pressure is made over the suprapubic region by applying an ordinary abdominal binder.

Section of the Frenum in Circumcision and in Frenulum Brevis.—Sainz de Aja (*Med. Ibera*, Madrid, 1918, IV, 269) states that the frenum, during coitus, corrects the shape of the glands and contracts the meatus, thus giving proper direction and force to the semen. Therefore, when circumcision is done on a person with a normal frenum, it should be let alone. When it is abnormal, or when it is necessary to cut it, one should be careful in suturing to preserve the proper degree of tension.

Impotency.—V. D. Lespinasse (*Surgical Clinics of Chicago*) states that congenital and acquired hypoplasia of the testicles are the only types of impotency that call for transplantation of the testicle. Absence of the internal secretion of the testicle is the etiologic factor in impotency. Sometimes this condition can be cured by giving the patient by mouth large amounts of desiccated animal testicle or by transplantation of the human testicle. The

latter procedure may be performed on *en masse* or by morcellation. The latter method has been employed exclusively by the author. In some of his cases the results were marvelous; but in others they were not so good.

Operation for Incontinence of Urine.—Hugh H. Young (*Surg., Gyn. & Obstet.*, Jan., 1919) reports two cases in which he did a plastic operation in two stages for the repair of the bladder sphincter, a successful result being obtained in each instance. The first stage consisted in making a suprapubic wound and restoring the internal sphincter; and the second, in repairing, through a perineal incision, the triangular ligament and the external sphincter. In performing the operation, the author uses a particular kind of needle holder, which he calls the boomerang, because the point of the needle is pushed, by the action of a spring, back through the tissues toward the surgeon. The operation is described in detail. As the patient is recovering, he is taught to exercise the sphincter muscles by checking the urinary stream voluntarily several times during each act of micturition. In some of the cases, the incontinence had resulted from a perineal section that had previously been performed with the vain hope of relieving frequency of urination and pain. In the other case, the patient had been subjected to a bungling surgical procedure for the removal of the prostate by the perineal route. In one of Young's cases his plastic operation had been done ten years previously.

Neuralgia of the Testicle Caused by Adhesions of the Tunica Vaginalis.—I. N. Posados (*Semana Med.*, August 1, 1918) refers to cases of testicular neuralgia that he considers to be due to adhesions between the tunica vaginalis and either the testicle or the epididymis. He has operated upon eight cases, the procedure being practically that used for the radical cure of hydrocele. He does the operation under local anesthesia and takes special care to staunch any hemorrhage that may occur. Some of the author's patients had previously suffered with gonorrheal epididymitis, while others were affected with the varicocele. As aids to the diagnosis, Posados states that the scrotum is usually relaxed and looks smooth, unless associated with varicocele. The epididymis is commonly enlarged, small nodules being found at one or both extremities, usually in the lower pole. There may also be localized areas of thickening in the testicle, and both the testicle and the epididymis are extremely sensitive to pressure. A small amount of fluid may be found in the cavity of the tunica vaginalis. When a varicocele is present, the amount of pain is much greater than the slight degree of dilatation of the veins would account for.

Technical Errors in the Operative Treatment of Urethral Strictures.—L. E. Schmidt (*Surg. Clin.*, Chicago, 1918, II, 813) points out that failure to split the urethral entirely in the strictured area and failure to remove the chronic inflammatory tissue surrounding this area are responsible for many of the unsatisfactory results obtained. If possible, the upper wall of the urethral mucosa should be left intact. The use of instruments like the Guiteras guide, with a groove on the upper surface, may lead to the entering of the bladder through the prostate, instead of through the urethra. In such cases, another operation must be done in order to correct the false passage and remove the inflammatory exudate, as well as to obtain a continuous mucosa, if possible. Another error in technique is that of allowing the retrostrictural enlargement to persist, thus causing dribbling. The lower portion of the sac should be excised, bringing the edges of the remaining mucosa together over the catheter that has been introduced.

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CATARACT EXTRACTION BY THE INTRACAPSULAR METHOD; ADVANTAGES AND TECHNIQUE.

BY

DE WAYNE HALLETT, M.D.,

NEW YORK, N. Y.

Read before the Homœopathic Medical Society of the State of New York, April 8th, 1919.

THE ADVANTAGES OF REMOVING THE CATARACT IN ITS CAPSULE.—That method of cataract extraction most free from loss of vitreous and post-operative inflammation is the one most desired by the surgeon, for the reason that the patient will then secure normal vision in every case where the eye possesses a clear media and a normal fundus, and I believe we find that method most perfectly developed in the technique of Major Henry Smith of the British Army, as modified by the use of the Fisher lid hooks and in some other minor details.

The usual cause of an escape of vitreous from the eye is from pressure of the lids upon the globe, and this can be reduced to a minimum by abandoning all mechanical spring specula, in favor of the separate lid retractors held by the competent assistant.

The most common cause of post-operative inflammation is the retention within the eye of portions of the capsule and cortical substance, shreds and particles of which may lie or get within the lips of the corneal wound. This cause is obviated by extraction in the intact capsule.

Infection of an operated eye will lead the surgeon to severe and painstaking scrutiny of every detail connected with

the case, including the nurses, solutions, assistants, instruments, himself, his technique, and the post-operative conduct of the patient.

Such infection is not infrequently due to delayed healing or the reopening of a partially closed wound, and this cause can be greatly reduced by permitting the dressings to remain undisturbed for five or more days; a procedure to which we take more kindly when the anterior chamber harbors no capsule or lens substance.

When the cataract is extracted in its capsule there remains no opaque substance in the area of the pupil; there can be no secondary capsular cataract subject to further surgery; the pupil is black; there is far less liability to iritis, secondary glaucoma, irido-choroiditis, and all those slow degenerative changes which cause the eventual loss of many aphakic eyes months or years after extraction by methods in which the capsule is left behind.

The cataract may be extracted while still immature, thus saving the patient from the months or years of weary waiting for a ripening, as is the custom otherwise, and this means a great deal, since the patient is usually already advanced in age and liable to degenerative retinal changes. When required to wait they are deprived of many physical joys and exercise, and often greatly depressed by the loss of vision.

A year or more may be saved to the patient by extraction in the capsule of the immature cataract, and it is proper to do this when one eye has advanced to the point of rendering vision no longer serviceable for ordinary purposes, and particularly if a similar condition is approaching in the other eye.

In this method, there are, I believe, no dangers greater than are present in other methods.

The Value of a Preliminary Iridectomy.—It often happens that the cataract patient is making his first acquaintance with a hospital, in which case he is apt to be apprehensive, nervous, fearful and in a state of tension.

A preliminary iridectomy under these circumstances teaches the patient that an operation upon the eye can be painless, and also it provides that state of the eye in which the extraction is more rapid, less liable to complication, and affords better average visual results. It promotes a cordial relationship in which the patient comes to the operating table for the extraction in a more tranquil frame of mind and body.

It avoids the probability of blood in the anterior chamber, which in the combined method, may obscure the operative field. As compared with the simple extraction, it avoids the likelihood of the iris hanging over the edge of the lens as it engages in the wound, and there is less danger of entanglement of the iris in the wound. The lens emerges more gradually and therefore vitreous loss is not so apt to occur.

The corneal wound for iridectomy is small and affords less chance of ill effect from any faulty conduct on the part of the patient.

Ten days or more should elapse before the extraction.

Preparation of the Patient.—Take the blood pressure, make a physical examination and a urinalysis.

Make a bacterial examination of the conjunctival secretion.

Instill of a 25 per centum solution of solargentum-Squibb, gtt. i., t. i. d. for one or two days.

Clip the outer half of the eyelashes from the upper lid to one-half of their length.

During the preceding evening, give of compound licorice powder, one dram, and in the morning an enema.

Scrub the face with soap and water the day of the operation, and the region of the eye with a solution of bichloride of mercury, 1-6,000.

Apply a wet dressing of bichloride, 1-6,000.

A half hour before the operation administer a hypodermic of Abbott's H. M. C., one-half strength.

Just before the operation instill cocaine, 4 per cent. solution, four times, and adrenalin twice, about a minute apart.

Finally, flush the entire conjunctival sac with a warm solution of boric acid.

Sterilization of Instruments.—All knives and cutting instruments are immersed in absolute alcohol for 20 minutes, then laid in a tray where boiling water is poured over them, after which they are laid out on a sterile towel until wanted for actual use.

Other instruments are boiled for a period of five minutes in a weak (½ per cent.) solution of sodium hydrate, followed by the alcohol and flushing.

Were it not that the cutting edges are dulled by boiling, all instruments would be so treated, since it is the one certain method of sterilization.

Technique for the Right Eye.—The surgeon stands behind the patient's head and fixes the eye with forceps catching firmly the lower border of the internal rectus tendon, using the left hand which has been passed under the assistant's right arm.

In this position the surgeon, holding the knife as he would a pen, lays it flat upon the cornea, cutting edge upward (toward the brow) in the position just short of half of the cornea below which he proposes to traverse the anterior chamber.

Then he draws the knife toward the temple and drops it down to the level of the limbus, and then passes it into the eye and straight across the anterior chamber to emerge at the opposite limbus. The counter puncture having been made, the handle of the knife is depressed so that the point may sweep above the inner canthus. The incision is finished by one upward forward sweep, if possible, at least with the fewest possible strokes, cutting out through the cornea about one or two millimeters short of the corneo-scleral junction.

The assistant stands on the left side of the patient and holds the lid hooks (retractors), upon which his entire attention is fixed. The lids should be held away from the eye without any too considerable tension. The two prongs of the Fisher lid retractor (hook) under the upper lid should be well up above the tarsal cartilage to obviate the danger of slipping out.

It is occasionally helpful if a second assistant holds up the patient's brow with his finger.

With another retractor the lower lid is held down and just enough away from the eye to free it from contact and to afford operating room, but the retractor should never draw the lids so apart as to cause the patient any pain. Properly held, these retracting hooks will wholly prevent any orbicularis contraction from making pressure on the eye, and should the patient act in so faulty a manner, the competent assistant will control the situation by only such traction as may be necessary.

The Delivery of the Cataract.—The surgeon shifts his position to the right side of the patient (this is important, as it affords observation of the entire operative field, even if the patient look upward, and the patient is never requested to look downward, and will naturally look straight toward the ceiling or will rotate the eye upward, and this is the safe position of the eye for the lens delivery; the position in which

there is the least likelihood of loss of vitreous). However, in case of a really prominent eye it is frequently unnecessary that the surgeon shift from the head of the patient.

The surgeon holds the Smith hook (an instrument like a large-size strabismus hook) in the right hand as he would a pen, and in the left hand the Smith-Fisher instrument (a spatula at one end and a needle point at the other). The Smith hook is laid flat upon the cornea, point upward, and about 3 millimeters from the lower limbus with pressure steadily backward toward the posterior pole of the eye, and to this inward pressure is added a lateral sliding of the hook.

The suspensory ligament is expected to break at the upper part of the lens and the lens to present in the wound.

Continued pressure is made till the cataract passes its equator through the wound, the hook following it up with steady and gentle pressure. The lens is then hanging in the wound and the hook is then tilted with the point raised from contact with the cornea, but with gentle pressure maintained with the elbow of the hook, and the point slowly and deliberately passed around the cataract, sweeping it out of the eye. The point must not push the lens for fear of rupturing its capsule, nor enter the anterior chamber for fear of rupturing the hyaloid membrane.

During the time of making pressure with the Smith hook, the surgeon holds in his left hand the Smith-Fisher instrument with the spatula end just above the corneal wound ready to pass it into the wound behind the lens up which it may slide as on an inclined plane in case of previous prolapse of vitreous.

Or, in case the lens will not pass beyond its equator, to reverse the instrument and pierce it with the needle point and thereby drag it out. This latter procedure is not to be resorted to, however, unless absolutely necessary, for the reason that the lens may then peel out of its capsule and leave it within the eye or between the lips of the wound. Rather should the surgeon be patient with his backward and sliding pressure.

Technique for the Left Eye.—The surgeon stands upon the left side of the patient throughout the operation; the assistant upon the right side.

The assistant holds the Fisher double lid hook in his left hand and the other lid elevator in his right hand, raising that arm in order that the surgeon may pass his left hand beneath

it, in which, for the incision, he holds the forceps and fixes the eye by grasping the lower border of the tendon of the internal rectus muscle, and later the surgeon holds in this hand the Smith spatula (the Fisher needle at its upper end).

The section of the cornea with the knife in the surgeon's right hand is as before described, and after the incision he uses in this hand the Smith squint hook flat upon the cornea with pressure toward the posterior pole of the eye with some slight lateral motions to cause the lens to break from its suspensory ligament and present in the wound.

As the lens passes its equator beyond the wound, the steady pressure is maintained with the elbow of the hook and the point slightly raised and swept around the lens to roll it out of the eye.

The Toilet of the Eye.—If the operation has progressed favorably to this stage, the wound will be closed but the edges of the iris may be caught in it. Do not ask the patient to look down, but replace the iris with the Smith repositor, entering it at the angles of the wound. Seldom is there any occasion for any final flushing of the eye. The hooks are removed, the upper one first, admonishing the patient to close the eyes in just the manner of going to sleep. A miotic is instilled (pilocarpine 1 per cent.), a sterile ointment on the lids, a thin moist dressing (solution of bichloride of mercury, 1-6,000) applied, followed by a thin dry one strapped with zinc oxide plaster, and finally a Fox perforated aluminum shield also fastened with adhesive straps. A dry dressing on the other eye and the patient is placed in bed, comforted with whatever cheerful remarks the circumstances will permit and advised to keep the eyes quiet, not to roll them about, and particularly never to squeeze the lids together.

The After Treatment.—The first dressing is made on the fifth day, a drop of atropine instilled and a cathartic given.

On the fifth or sixth day the dressing is omitted from the unoperated eye. On the sixth or seventh day a back rest is allowed, and on the eighth or ninth day, all going well, the patient may sit up in a chair. On the ninth or tenth day a drop patch may be substituted, and usually on the twelfth day a discharge may be given. Atropine in a ½ or 1 per cent. solution is usually continued for another week.

These specifications are subject to modification according to the temperament, the conduct, or the physical state of

the patient but in general they are believed to represent the method likely to yield the best result.

A test of vision made before the patient leaves the hospital is of value even if somewhat imperfectly made, since it affords data for a completed chart or record, and if the patient is shown that practical vision is present, it provides a contented mind.

With the ophthalmoscope the intraocular condition should be observed.

A month or so later the patient may have glasses prescribed.

The following is a list of all intra-capsular extractions made by the writer at the New York Ophthalmic Hospital to date, listed according to the visual results obtained. The cause for visual results of less than 20/40 is appended:

No.	Name	Capsule Intact	Age	Lens	Referred by	Result	Loss of Vitreous
1.	C. E. T.	Yes	72	Immature	Private	20/10	None
2.	Mrs. J. G.	Yes	68	Immature	Clinic	20/10	Following
3.	A. H.	Yes	52	Mature	Private	20/10	None
4.	Mrs. E. F.	Yes	60	Mature	Clinic	20/15	None
5.	George L.	Yes	72	Immature	Dr. J.L.B.	20/15	None
6.	Mrs. J. D.	Yes	61	Mature	Private	20/15	None
7.	Mrs. C. C.	Yes	64	Immature	Private	20/15	None
8.	Mrs. M. B.	Yes	70	Mature	Private	20/15	None
9.	Edward K.	Yes	57	Immature	Clinic	20/15	None
10.	Wm. H. T.	Yes	63	Immature	Clinic	20/15	None
11.	W. A. M.	Yes	69	Immature	Dr. J.E.T	20/15	None
12.	Mrs. H. F.	Yes	66	Immature	Private	20/15	None
13.	John A.	Yes	59	Mature	Clinic	20/20	None
14.	Edward K.	Yes	55	Mature	Clinic	20/20	None
15.	Mary W.	Yes	67	Mature	Clinic	20/20	None
16.	Fred S.	Yes	53	Mature	Clinic	20/20	None
17.	Kate C.	Yes	62	Mature	Dr. G.G.M.	20/30	Preceding
18.	Mrs. L. D.	Yes	65	Mature	Clinic	20/20	Following
19.	Mrs. F.	Yes	60	Immature	Clinic	20/20	None
20.	Thos. M.	Yes	65	Mature	Clinic	20/20	None
21.	Mrs. E. R.	Yes	75	Mature	Clinic	20/20	None
22.	Mrs. L. D.	Yes	66	Mature	Clinic	20/20	None
23.	Edward C.	Yes	69	Hypermat.	Dr. C.C.S.	20/20	None
24.	Mrs. S. S.	Yes	79	Immature	Clinic	20/25	None
25.	Thomas F. B.	Yes	58	Immature	Private	20/25	None
26.	Mrs. R. Q.	Yes	76	Mature	Private	20/25	None
27.	Mrs. S. V.	Yes	73	Mature	Private	20/25	Following
28.	Thomas M.	Yes	64	Mature	Clinic	20/30	None
29.	Mrs. E. P.	Yes	84	Mature	Private	20/30	None
30.	Mrs. C. B.	Yes	72	Immature	Clinic	20/30	None
31.	John B.	Yes	76	Immature	Clinic	20/30	Following
32.	Mrs. M. L.	Yes	67	Immature	Dr. G.G.M.	20/20	None
33.	Mrs. M. M.	Yes	70	Mature	Clinic	20/30	None
34.	Mrs. R. B.	Yes	57	Mature	Clinic	20/30	None
35.	Mrs. K. M.	Yes	55	Immature	Clinic	20/40	None
36.	Mrs. H. B.	No	55	Immature	Private	20/40	None
37.	Mrs. E. D.	Yes	48	Immature	Private	20/40	None
38.	Miss F. H.	Yes	54	Mature	Private	20/40	None
39.	Mrs. M. W.	Yes	71	Mature	Clinic	20/50	None
40.	Mrs. B. A.	Yes	67	Mature	Clinic	20/70	None
41.	Mrs. F. G.	Yes	64	Immature	Clinic	20/100	None
42.	H. Q.	No	58	Nuclear	Clinic	10/200	None
43.	H. Q.	No	59	Nuclear	Clinic	4/200	None
44.	James M.	Yes		Immature	Clinic	10/100	None
45.	James M.	Yes		Immature	Clinic	20/200	None
46.	Mrs. L. S.	Yes	75	Immature	Private	2/200	None
47.	Mrs. D. F.	Yes	68	Immature	Dr. G.G.J.	1/200	None
48.	Samuel C.	No	79	Immature	Clinic	None	None

Summary of Forty-eight Consecutive Extractions. —In 44 cases the capsule was intact.

Of the 4 cases in which a part or all of the capsule remained within the eye, 2 had a subsequent irido-cyclitis and 2 were in eyes with a prior chronic glaucoma.

In only 5 cases was there a loss of vitreous; 4 following and 1 preceding delivery of the lens.

Each of the cases in which a vitreous loss occurred had a final vision of 20/30 or better.

Glaucoma was a prior complication in 6 cases, 2 of whom secured a final vision of 20/30 or better.

Atrophy of the optic nerve was a prior complication in 1 case.

High myopia with posterior staphyloma was present in 4 cases.

Retinal hemorrhage was a prior complication in 4 cases.

Two cases had corneal scars.

Subsequent complications were:

Three of them struck their eye during sleep.

Two of them squeezed their lids and opened the wound, each on the eighth day.

Four had irido-cyclitis in one of which the eye was lost.

One had an endarteritis with retinitis proliferans.

One left the hospital in perfect condition and later had a detached retina, apparently the result of uncontrolled weeping on account of the supposed loss of a son in the war.

A mild iritis was a complication in two cases.

The average age was 65 years.

There were 22 immature, 23 mature, 2 nuclear and 1 hypermature cataracts.

A preliminary iridectomy was made in all but one case.

The iris appeared free from the wound at the time of applying the dressing in all but one case.

Subsequently the iris was found caught up by one pillar in 8 cases. and by both pillars in 2 cases, none of which required any further surgery.

Case number 39 had high myopia with posterior staphyloma.

Case number 40 had an atrophy of the optic nerve.

Case number 41 had atrophic changes in the macular region together with high myopia and posterior staphyloma.

Cases numbers 42, 43, 44 and 45 on this list were respectively the right and left eye of two patients in whom a simple chronic glaucoma was a known prior complication, and for whom a poor visual result was fully expected and could not be otherwise. Each had been the subject of an Elliot-sclero-corneal trephine operation, and they were given their only chance of useful vision.

Case number 46 was known to have had a previous retinal hemorrhage.

Case number 47 was the one with a subsequent retinal detachment.

Case number 48 had had a previous iritis in the other eye, and was accepted for cataract extraction only after four months of treatment and observation. When operated the eye appeared quite fit, but a subsequent disastrous irido-cyclitis developed.

Of the 8 cases in whom the final vision was 20/70 or poorer, there were, then, only two in which good vision was a possibility.

These 8 cases constituted 21 per cent. which were complicated, and of the entire series of 48 cases,

79 per cent. obtained 20/40 or better,
70 per cent. obtained 20/30 or better,
56 per cent. obtained 20/25 or better,
and 48 per cent. obtained 20/20 or better.

Of them 92 per cent. had an intact capsule.

Excluding the 8 complicated cases, the visual results of the remaining 40 averaged 20/25.

There was a loss of vitreous in less than 11 per cent., and since each of these secured a vision of 20/30 or better it surely was a complication of no special importance.

These cases were taken as they changed to come, and operated whenever it seemed probable that their vision would be improved.

Singultus.—O'Dell reports an obstinate case of singultus with a general Seplecaenia. Numerous methods of treatment were unavailing. Ultimately the author prescribed scutellaria specific tincture in fifteen drop doses in hot water every hour and five grain doses of magnesium phos. 3x trituration, five grains in hot water every two hours. The patient continued to hiccough for 36 hours when the paroxysms stopped and did not return. Scutellaria was prescribed on the recommendation of Prof. J. M. Scudder, and the magnesium phos. on the principle of biochemic therapy.—*The Eclectic Medical Journal*, April, 1919.

TROCAR THORACOTOMY.

BY

HERBERT P. LEOPOLD, M.D.,

Late Captain M.C., U.S.A., Associate Professor of Surgery, Hahnemann Medical College, of Philadelphia; Junior Surgeon to Hahnemann Hospital.

Read before the Clinico-Pathological Society of Philadelphia, March 6, 1919.

It was my good fortune to be assigned to the Surgical Service at the U. S. General Hospital No. 28, Fort Sheridan, Ill., and to have associated with me an officer who had a large experience as a member of the "Empyema team" at Camp Pike, Little Rock, Ark. It was his conviction that the very best results were obtained by the method, known as "trocar thoracotomy," to be described later, a method devised and perfected by Lieut. Victor P. Diederick, M. C., U. S. Army. At the time we arrived at the hospital there were a number of empyema cases awaiting treatment, so at once this method was instituted with the most gratifying results.

The treatment of empyema has for a long time been very unsatisfactory. To the careful observer, it must be evident that the progress made in the treatment of infections of the pleural cavity, has not kept pace with the medical and surgical progress along other lines. The results prove that the old fashioned methods of thoracotomy and costectomy are inadequate, tedious and, at times, really dangerous.

All our pneumonia patients were carefully examined daily with the idea of determining pus in the pleural cavity. To this end soldiers suffering with the disease were as a routine X-rayed at the end of 14 days, after the onset, if the stage of convalescence was not well established at that date. Whenever the X-ray plate showed possible signs of fluid, aspiration under the strictest aseptic technique, was carried out. If as the result of this aspiration macroscopic pus was present or if the fluid examined in the laboratory showed pus organisms, surgical intervention was immediately instituted.

There are certain factors which have a distinct bearing upon the surgical treatment that require emphasis: 1st—The degree of toxemia; 2nd—the presence or absence of pneumonia or septicemia; 3rd—the location of the pus.

The first two must be carefully considered when arriv-

ing at a decision as to whether the patient should be operated upon and if so, the nature of the operation. It is important to remember that in cases of empyema, still suffering from an active pneumonia, especially of the hemolytic streptococcic variety, it is better to aspirate with a Potain aspirator or syringe, even if this must be repeated a number of times, to lessen the absorption of the toxines. About 5 per cent. of these patients recover without further operation. It would be a serious matter in these cases to produce a pneumothorax with collapse of the lung, in the presence of an active pneumonia on the same side or even of the opposite side, to say nothing of the possibility of producing a mixed infection, by attempting an open operation.

The location and limits of the cavity having been established by the free use of the aspirating needle, the site for the thoracotomy is selected. It is unnecessary to select the most dependent portion of the cavity, as the tube passes to the bottom of it. If possible it is best to select a site near the anterior axillary line, as at this point the heavy muscles of the back are avoided, and the patient is saved much discomfort, and it also permits of better attention to the tube and wound. If the pus cavity is substernal or between the lobes anteriorly, it may be reached by a trephine opening through the sternum between the third and fourth costal junctions. At this point the tube may be made to enter the right or left pleural cavity.

I wish to call your especial attention to the operation known as trocar thoracotomy, namely the drainage of the pleural cavity, irrespective of the character of the pus, by means of a Carrel tube or a No. 14Fr. rubber catheter, introduced by means of a specially devised trocar and cannula, just large enough to thread the tube into the pleural cavity.

The skin, subcutaneous and intercostal tissue are anaesthetized by means of a ½ to 1 per cent. solution of novocain, apothosine or procaine and adrenaline. The skin is then punctured with the point of the scalpel sufficiently to allow of a snug passage of the trocar. This puncture is made over the interspace below the one to be entered. The trocar and cannula, properly prepared, are then passed through the skin wound and upward over the outer surface of the rib until it reaches the upper margin of the rib, when the tip of the trocar is pointed inward and hugging the upper margin of the rib closely is forced into the cavity. The trocar is then

withdrawn from the cannula sufficiently to allow the tube to be inserted through the extra arm of the cannula. The rubber fittings about the outer end of the cannula prevent the air from entering the pleural cavity. The outer end of the tube having been clamped and when it has been introduced deep enough into the cavity, the cannula is withdrawn over it. The tube is then clamped near its entrance to the skin, thereby allowing the clamp on the outer end to be removed to allow of the complete removal of the cannula. The tube is attached to the skin by means of a linen thread, and adhesive plaster. A ten inch square of cotton and gauze is threaded over the tube and held in place by adhesive plaster. A 100 c.c. glass syringe is attached to the tube and the cavity aspirated; if the pus is too thick to be aspirated a small amount of a *neutral* Dakin's solution is allowed to run in, this quickly liquefies the pus, so that by a repetition of this procedure the entire cavity is emptied. The use of Dakin's solution to irrigate these cavities is undoubtedly of great value. In cases with pulmonary or bronchial fistula it can not be used, as it provokes violent attacks of coughing; in such instances saline solution is used. The patients are irrigated with Dakin's solution (unless contra-indicated) every 3 or 4 hours, night and day, with the thorough cleansing of the cavity at each irrigation. While the syringe is detached the tube is always clamped to prevent the air from entering the pleural cavity.

It is surprising how quickly this method will sterilize these dirty cavities. A bacteriological control is absolutely necessary. A graduate pipet of pus is taken from the fluid aspirated at the original operation; this pus is plated, cultivated and the subsequent colonies are counted, and from these figures the number of organisms is computed and then a comparison is made with a parallel procedure repeated each 24 hours. If mixed infection occurs it will be immediately noted in the colonies on the plate. The size of the cavity is measured by noting each day the amount of fluid used to fill it. By these means some information is gained respecting the rapidity of sterilization and the obliteration of the cavity.

The end results are largely dependent upon the continuous attention given these patients and particularly upon the very rigid surgical technique followed in the operation and subsequent dressings. The "no contact" method is imperative, as is also the wearing of a sterile gown and gloves. The

wound is never dressed unless there is evidence of leakage, when the skin around the tube is mopped with ether, benzine and iodine, and a clean sterile dressing applied. As a time-saver and because it was more comfortable to the patient and because we could get the benefit of continuous drainage, a modification of the Brook method was adopted.

The Advantages of This Method: 1. It is an operation that may be done with the patient in bed and under local anaesthesia. Therefore it becomes a minor operation.

2nd. The possibilities for disturbing the negative pressure in pleural cavity and of secondary or mixed infection, are minimized.

3rd. The assurance of ample drainage, obviating rib resection or other operative procedures.

4th. Treatment can be repeated at definite intervals and an accurate account kept as to the amount and character of the pus; checking this with the bacteriological examinations gives data of prognostic value.

5th. Fibrinous exudate and solidified pus quickly liquefy under the action of Dakin's fluid, and the most dependent portion of the cavity is completely drained.

6th. It greatly lessens the period of convalescence and affords a method which is scientific, sanitary and satisfactory, and finally the work on empyema under the foregoing plan is a striking example of definitive surgery. Because I fully believe, that with an early diagnosis and the immediate institution of a method which presents the advantages enumerated, we have an absolute preventative to the pathological condition which we all dread, *i. e.*, an extensive fibrinous exudate, a contracted lung, and a big dead space secreting endless pus.

Quick diagnosis and treatment should preclude the necessity for rib resections, lung decortication and other operative procedures.

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THE GREAT MEDICAL SCHISM.

BEING THE FOURTH ANNUAL HAHNEMANNIAN ORATION DELIVERED BEFORE THE HOMOEOPATHIC MEDICAL SOCIETY OF GERMANTOWN, APRIL 21, 1919.

BY

CLARENCE BARTLETT, M.D., PHILADELPHIA.

Professor in Medicine in the Hahnemann Medical College of Philadelphia.

For a number of years it has been the custom of our Society to commemorate the birthday of Hahnemann in some fitting manner. This generally took the form of a banquet at which eminent physicians of Philadelphia and elsewhere made suitable addresses. Four years ago, we adopted the set plan of listening to a specially prepared address, the subject of which should be matters pertaining to the life and teachings of Hahnemann and to the influence of this great medical reformer upon medicine of the twentieth century. The gentlemen who have addressed you in previous years have all presented thoughts of value, indeed I might say that the example set by them might well stimulate any of us to aspire to be requested to deliver the Annual Hahnemannian Oration of the Homœopathic Medical Society of Germantown. Gentlemen, I aspired, but being Chairman of the Committee it seemed indelicate to assume the honor. Circumstances from the outside stepped in and forced an invitation on me, and but little coaxing was required to secure its acceptance. Needless to say, I appreciate the honor, and shall do my best to present some thoughts which it is to be hoped will have some fitness for the occasion, and will interest, if they do not benefit the audience.

For years prior to his promulgation of the homœopathic law, Hahnemann was widely known as a translator, as a chemist, and as a physician. His premedical or university education was of the best. His services as a translator of chemical and medical works were in demand, which fact alone spoke for their value. As a chemist his fame today rests upon his discovery of a test for arsenic, and his wine test. The great Berzelius said of him: "He would have been a great chemist if he had not turned to be a great quack." As to practice of medicine, during his earlier days, it would impress

the average reader that Hahnemann could not have been very enthusiastic, for the most we hear from him is his disheartenment at the methods then in vogue. Indeed we find records of his strong disapproval of the polypharmacy, the bloodletting, and the irrational study of drug action incidental to the period. Holding such ideas, it was hardly to be expected that as a conscientious man he could have been at all active in ministering to the sick. In 1790 he translated Cullen's Materia Medica, and it was this work that gave him the first suggestion of a law for the selection of drugs for the cure of the sick. In 1792 he published his celebrated essay advocating the benevolent treatment of the insane, antedating Pinel's unchaining the lunatics in the Bicêtre by six months. In 1796, he published his first homœopathic essay, entitled "On a New Principle for the Selection of the Remedy in the Treatment of the Sick." This appeared as did many other of Hahnemann's previous and subsequent writings in Hufeland's Journal. Hufeland at that time and for many years afterwards was recognized as the Nestor of German Medicine. While not lacking in criticisms of Hahnemann, he nevertheless remained a personal friend. At first there may have been some disposition on the part of a few to regard Hahnemann's new teaching without prejudice, but it was not long before the new law of cure became a subject for rancorous debate or polemics.

Quite naturally he made examples of his precepts, and practiced on the sick. Then he brought to bear against himself the animosity of the apothecaries, whose business must necessarily be annihilated if Hahnemannian principles should prevail. Enemies in the profession itself entered the arena, and it was not many years before the combat became widespread. As applied to the homœopathists the following are some choice selections found in medical literature*: "Huge system of imposture," "guilty of manslaughter or at least of passive murder," "the lies of homœopathy," "craven knaves," "mendacious master Hahnemann," "odious system of quackery," "the semi-insane followers of Hahnemann," "disgusting and loathsome features of globulism," "fraud and humbug," "turned assassins to earn a livelihood," etc. Even as late as the '80's an old school physician practicing in Pennsylvania declared in open meeting that "every homœopath should be hanged by the neck until he was dead three times."

*Quoted from Helmuth.

Why three times, I have always wondered and it may be suggested that it is necessary to kill one of us that often before he is surely downed. The animosities were not confined to the physicians alone, but spread to the laity, the acceptance of homœopathy by some of whom led to social ostracism. The various discourses were published either in the leading medical journals of the period or as pamphlets. Hahnemann himself was not without an enthusiastic following. Likewise he appears to have been abundantly able to take care of himself in debate, as shown by his essays, "The Medicine of Tradition," "Allopathy," "Advice to the Sick," etc., all of which may be found in his Lesser Writings. It was not until 1810, or fourteen years after the publication of his first essay "On a New Principle, etc.," that the first edition of The Organon appeared. It was in this year also that Hecker presented his famous diatribe, which was shortly followed by communications of like nature by other writers. It would now seem that the principal occupation of Hahnemann's colleagues was to consign his doctrines to oblivion. The "man on the side lines" cannot help but feel that animosities aroused were not unnatural in view of the fact that Hahnemann's exposure of the danger of blood-letting and the silliness of polypharmacy bade fair to hold them up to the ridicule of the civilized world. That the danger was a real and not an imaginary one is attested by the state of affairs in the 20th Century, when polypharmacy is discredited in its entirety, and blood letting abandoned excepting under certain rarely encountered and definitely specified indications. In 1829, following upon the visit of a number of his disciples to him at Coethen, the Central Society of German Homœopathists was formed. This appears to have been the first of our scientific organizations.

During all these years, no less than 33 after the initial essay, no evident desire was exhibited on the part of the early homœopaths to break away from the medical fold. Nevertheless the persecutions became such that separation eventually became necessary.

The number of Hahnemannian adherents increased rapidly, always of course from the ranks of the regular school of medicine. Homœopathy spread to this side of the water, where it soon had a great vogue. In 1842 the Orange County (New York) Medical Society, in accordance with its chartered rights, forbade a homœopathic physician practising

within its jurisdiction. "This fatal step caused the persecuted sect to appeal to the Legislature, which not only deprived the county societies from preventing those to whom they objected from practising, but also allowed anybody to practice who chose to call himself a physician." (D. B. St. John Roosa, address before the New York Academy of Medicine, November, 1888.) The American Institute of Homœopathy was organized in 1849, and the American Medical Association was made necessary in 1851 to combat the dangerous heresy. In America professional and social ostracism soon became as complete as it had been previously in Germany. Regular physicians in good standing in their medical societies were promptly expelled therefrom on their acceptance of the new medical faith. Within the medical lives of some of my hearers, a teacher in one of our local colleges was forced to tender his resignation because he permitted the attendance of a homœopathic physician after his orthodox colleagues had pronounced the illness hopeless.

In 1833, Hering introduced the morbid products of contagious diseases as remedies. The subject had been broached ages before, but Hering's pre-eminence gave it added dignity. It was really a resuscitation of the old formula, "aequalia aequalibus curantur." Hering contended that all contagious diseases contained within their morbid products a substance which would eventually be found to be an efficient remedy for their cure. How near right he was, time alone will tell. After nearly 100 years of investigation we have the modern practice of serum therapy, the fundamental principle of which may well be stated in Hering's own words, even unto today. Hering also stated that the results were much the better if the remedy was prepared from the products secreted by the patient himself. Thus it was that remedies were manufactured from choleraic stools, typhus eruptions, smallpox pustules, etc., etc., without number. Hering's teachings were combated by a most efficient weapon, namely ridicule. To use the exact language of a reviewer first quoting Hering: "Nay, he asks, may we not expect, if this doctrine be true, that we shall find the specific remedy for every epidemic pestilence, in the first case of it that breaks out, and that the matter obtained from this one will serve to check the disease in all the rest? And this plan he actually proposes in a later paper." Then the reviewer proceeds to ridicule and pictures

the great Dr. Hering catching a louse and gravely making the latter into the 30th potency; he thanks the Doctor for not taking out a patent on his discovery. Finally, unable to do justice to the subject himself, gravely quotes Bobby Burns. Waxing more humorous, the reviewer proposes a remedy for the cure of cannibal tribes who have a penchant for "cold missionary on the sideboard." With wonderful prophetic instance, Hering's psorinum is characterized as produced "by handling some stuff from Germany." Truly there is nothing new under the sun. The potentization and administration of the patient's own blood for the cure of his disease appears likewise to be no new matter, for Gross utilized this remedy for the cure of haemoptysis and other diseased conditions.

In the early '80's the medical profession of America may well have been described as occupying two armed camps, allopathic and homœopathic. To the former, the taint of the latter was as the unpardonable sin. Having once practised homœopathy was sufficient to make the restoration of the transgressor an absolute impossibility. The undesirability of reforming repentant therapeutic sinners was evidenced by the rules prevalent in the medical colleges of that day.

About 1882 New York state physicians formulated a new code of ethics, providing for the unity of medical brotherhood. Hereafter, it was fondly hoped that allopaths and homœopaths could live together in harmony. And then what happened! It was no longer "Allopaths vs. Homœopath" but "New Code vs. Old Code." The professional schism in New York City became a serious matter, and extended through the state. The New York State Society adopted the new code, whereupon there was a secession of many members, and the New York State Medical Association was formed in order that its members might study medicine in peace without contact with repulsive homœopaths, the American Medical Association supported the old codists. The fight extended, and spread over the entire country. Overlapping organizations (old codists and new codists) were formed in more than one state. Little by little, however, old prejudices were withdrawn, and now after the lapse of 35 years, we have a spirit of liberality prevailing.

Throughout the period of the "Battle of the Codists," debate became everything but parliamentary. Epithets which had previously been reserved for homœopaths and homœ-

opathy were freely hurled at the new codists for their temerity in attempting to upset the old order of things. The *N. Y. Medical Record* and the *N. Y. Medical Journal* espoused the new code, while the weekly medical journals of Boston and Philadelphia, true to the traditions of their home towns, stuck to the "antique." The N. Y. Post Graduate School accepted graduates of homœopathic colleges as students and advertised for patronage in our journals. The N. Y. Polyclinic, as well as that of Philadelphia, stuck to old-time religion and refused admittance to the therapeutic sinners, denying them the right to seek knowledge from orthodox circles. Is this not laughable in 1919? D. B. St. John Roosa, a leader among the new codists, remarked: "It is impossible to deal seriously with those who would drive out men from a learned profession not because their attainments are insufficient or their moral character defective, but because they are believed to hold erroneous views in materia medica and therapeutics."

It is not a pleasant task to give the history of a quarrel, especially one like that under review, in which the original difference of opinion was one for scientific investigation, but became what might well be called a disgraceful fight, principles being entirely lost from view. The early homœopathic physicians, certainly all who practised prior to 1850, were graduates of old school colleges, and were presumably as well educated medically and otherwise as were their antagonistic confreres. It was quite natural, therefore, that they should resent with considerable temper the aspersions cast upon their mental status and educational foundations. The departure from the realms of discussion was not unnatural on both sides, for the teachings of Hahnemann seemed to point most clearly that the practice of medicine of the day was actually dangerous to the life and health of those who submitted themselves to its ministrations. Indeed it is plain to the medical profession of today that the methods of Hahnemann's day were but little if any better than those caricatured a century before by Moliere.

From this unpleasant spectacle, let us study the situation at the present day, the *status praesens*. The Philadelphia County Medical Society now admits to membership all physicians legalized to practice medicine in Pennsylvania irrespective of therapeutic beliefs. The only prerequisites are good ethical standing and a sound medical education. In other

words, a homœopathic physician can now join it without stultifying himself. This being the case, we in Pennsylvania become eligible to membership in the old school state and national organizations.

As to hospitals, we have not been received as circumstances demand. We can hardly expect to be invited to join in the management of institutions of a quasi-private character, but when it comes to the community-owned hospitals, like the Philadelphia General, we are far from being recognized.

As to our local Bureau of Health, again we might say that we are tolerated as a school just about as far as circumstances will permit. While everything on the surface is serene and as individuals we are treated cordially, we as a school are not treated fairly. Why do I say this? There is a law on our statute books providing for 56 medical inspectors, of whom not less than 10 shall be homœopathic physicians. So far as I can learn, we have but eight representatives among the inspectors.

It is not improbable that when the above delinquencies are called to the attention of the proper authorities, the remedy will be ready. If so, it is only our own easy going ways that have led to the above mentioned presumptive neglects.

In numerous portions of the country may be noted honorary appointments of highly complimentary order. My college mates at Hahnemann, Drs. A. M. Eastman, of Minneapolis, and D. R. Strickler, of Denver, have respectively been elected President of the Minnesota Board of Examiners, and Secretary of the Colorado Board. Dr. Strickler has in addition been active in national councils for years.

Next we hold property devoted to the teaching and practice of homœopathy, *i. e.*, Colleges and Hospitals, in the United States to a value of not less than $100,000,000. In no sense are these institutions devoted to homœopathic medication exclusively, for specialists of all kinds practice on their staffs, and receive full recognition. All the laws governing general therapeutics are rigidly observed and fully accepted as necessary to the welfare of the sick.

Each side to the controversy has a materia medica, which is not lacking in severe critics within its own bailiwick. Both schools, moreover, acknowledge the necessity for as thorough a study of drug action as human industry and ingenuity can make. On the part of the old school there has sprung up

within the last fifteen years a more or less large number of pharmacologic laboratories, most of them richly endowed. These have succeeded mainly in teaching that much of the knowledge of the past has been based upon tradition and not upon demonstrable facts. Many drugs have been proven useless, and some few noted as positively dangerous, as well. Thus far they can hardly be said to have enriched our knowledge of drug pathogenesy to an appreciable extent. Their work to date may be described as destructive and not constructive.

On our part, there has been a like demand for revision. The work thus far instituted has been small, but in consideration of our lack of facilities, it has been as good as can be expected. We are limited to the labors of the Evans Laboratory under Watters in Boston; the Ohio State University under Hinsdale; and the Hering Laboratory under Haines and Griggs.

It is now no longer contended that homœopathic physicians are men of inferior education. During the earlier days of our entrance into the World's War, certain of the drugless cults applied to the army medical department for admission to the medical service. Their applications were refused. The official giving the decision remarked "that homœopathic physicians were, and always had been, educated men versed in the collateral medical sciences."

During the World's War, our men were well received in all camps, and I have yet to hear of but one individual against whom discrimination was made, and if all accounts are true, he richly deserved his fate. Old school physicians in the service were free to admit the limitations of their therapeutic resources, and watched with great, and I might add, friendly, interest the work of such of our colleagues as had the foresight to take some medical supplies with them. It is also within my knowledge that some doctors bought a consignment of homœopathic remedies to try out, and some others considered the results of our prescribing among the soldiers sufficiently superior to their own to seek treatment at the hands of their homœopathic confreres.

Polypharmacy has been abandoned as unscientific by the leaders of the old school. Nevertheless there remains enough of this irrational practice, especially among physicians who practice among the less educated portions of the community.

Hahnemann's doctrine of immunity as outlined in the first eighteen sections of the Organon has become accepted, although present-day laboratory investigations have so elaborated it in phraseology as to make it almost unrecognizable.

The law of similars is accepted in part by the vast majority of physicians. Nevertheless literature does not show many instances in which physicians announced that they were led to certain prescriptions because in physiological doses, the drug produced the same features which the ill patient presented, and which they desired to cure.

The question of dosage has ever been prolific of discussion, often of rancorous character. Nevertheless, we all can meet on one common platform, namely the smallest dose that will cure is the best.

Perhaps the greatest difference existant between the schools today is one of confidence in the medicinal action of drugs. On the one hand, we have the so-called regulars (shall I call them polypaths?) having little or no faith in anything but the pure palliatives and the few specifics, the latter including quinine in malaria; mercury, iodine of potassium and arsenic in syphilis; the salicylates in rheumatic fever, and iron in chlorosis. On the other hand, we have the homœopaths who have a materia medica in which they have more or less faith. This was amply shown in the recent great epidemic in which our physicians came out triumphant in comparison with our competitors. It has not been contended by the latter that their remedies were of the slightest value. Phenacetin, aspirin, and other drugs were prescribed, and candor acknowledged their worthlessness, if not actual danger. We used but few remedies, but as usual when but few remedies are indicated in a disease they are good. With gelsemium, bryonia, eupatorium, aconite, and ferrum phos., we did, as I believe, most excellent work, so that more than one of us passed through the trial with clean records. So patent were our results in the army camps, that there are to-day numerous physicians returning to civil life, who having observed, will now investigate.

So far as the homœopathic materia medica is concerned that has received considerable recognition in that Bartholow, Brunton, Phillips, Ringer, Hare, Wood and others have incorporated many of our recommendations for the benefit of their confreres. It matters not that the name, homœopathy,

has not been recognized officially, the facts are there nevertheless. The name it would seem, is the bone of contention. It is not many years ago, when a teacher of the University of Pennsylvania actually recommended that the homœopathic materia medica be taught in that institution, the only condition for its acceptance being that it should not be called homœopathic.

Having given you the history of the schism and the status praesens, the prognosis is next in order. That there will be a unity among physicians is clear, so clear indeed that he who runs may read. We are tired of fighting. We are weary of discussions, the conclusion of which is not based upon the merits of the arguments, but on the other hand is carried on with a definite determination that but one decision is to be reached. Those of Utopian bent are determined to force the issue, but such is impossible. Societies may pass by-laws, individuals may resolve to live the Golden Rule, and the era of good feeling will only be inaugurated. Results are to be attained only by education and tolerance. I can not state the demands of the situation better than by quoting the presidential address of Wm. Tod Helmuth (*N. A. Journal of Hom.*, March, 1889) as follows:

"Unity of the schools as they exist today can never be accomplished by legislation; it can never be brought about by controversy; and still less by the abnegation of a name; but it can be developed by that high degree of knowledge, that cultivation of the mental faculties, which in its perfection, is able to eliminate self from science, and can allow each school to freely and frankly acknowledge the good existing in the other. Then both possessing that unity of purpose which has always formed a part of the medical profession, each will grant to the other the unrestrained right to accomplish the great end as conscience and experience may dictate; and a harmony will result, which will not only redound to the honor of the profession but for the good of suffering humanity."

Lastly comes the treatment of the disease. The profession is tired of waving the bloody shirt. To those who have a penchant for bringing out this garment on any and all festal occasions, we would direct attention to a comparison made by my old and revered colleague, Wm. H. Bigler, who likened the homœopathy of such individuals to the blue ribbon on a prize bull terrier. The blue ribbon was homœopathy. For show

purposes the ribbon was in evidence. When there was real fighting to be done, the ribbon was carefully taken off and set aside, while the animal went into the fray with his teeth.

A cure we must have. The schism was a crime of the first magnitude. Whatever the value of homœopathy may have been to humanity, and we believe it to have been a benefaction second to none, a schism never should have been. Its damage spread far further than to the ranks of the participants. Unfortunately also the harm will continue for years after the thorough establishment of good feeling between the schools.

The homœopathic school was formed unwillingly. This is attested by the fact that the first homœopathic society was not organized until 33 years after the publication of the first edition of the Organon. Our school cannot therefore be called the result of a secession. It was a true schism. Its success became an unfortunate example for numerous selfish individuals to exploit pet theories or therapeutic swindles even unto the formation of alleged medical schools, members of which have been possessed of not the slightest medical education, and who therefore are not entitled to any consideration whatsoever. Moreover, the influence of the quarrel on the laity has been bad, for many of them see or profess to see in the refusal to accept certain practices as of value, just another example of medical prejudice. One of my old and esteemed patients was proud of his early adherence to homœopathy, covering a period possibly of fifty years and he was more than proud of his latter day conversion to about as silly a cult as ever found root in the Pennsylvania Commonwealth.

With the Homœopathic School acknowledged by the so-called regular profession as brothers and equals, one is entitled to ask the question, "Has the time come for amalgamation?" To this the answer must be "No; not for amalgamation, but for fraternizing and co-operation." What greater concessions can be offered us than those already accorded? In the beginning, epithets limited in severity only by the capacity of an unabridged dictionary, were applied to us, and now a leader in the Medical Department of the United States Army says that homœopaths always were educated men. In the beginning there existed therapeutic practices which Hahnemann recognized as not only pernicious but dangerous, and now

the best medical thought of the day does not hesitate to admit that the bleeding, the large doses and the irrational mixtures of drugs in vogue up to 50 years ago did more harm than good. From a position of extreme confidence in a mass of drugs the physiological action of which was but little known, our competitors have assumed a position of therapeutic nihilism with an absolute loss of faith in the value of medicines in any dose whatsoever. To put the matter very plainly, and eliminating the few brilliant examples of specific remedies and the strict palliatives, the regular profession at heart is composed of smaller dosers than even the practitioner in the highest dilutions. "He is the best physician who is convinced of the worthlessness of most drugs," has gotten to be an adage.

If amalgamation is not advisable, then what? Shall sectarianism in medicine continue? Now the term sectarianism savors somewhat of the offensive, and the reason therefor is that the human mind is too apt to make it synonymous with fanaticism, an entirely different matter. Sectarianism can be liberal; fanaticism can never be so. Sectarianism can tolerate the opinions of others; fanaticism is ever intolerant. Our sectarianism must savor of a liberality that partakes more of a therapeutic specialism, for after all, homœopaths are but therapeutic specialists.

Thirty-one years ago, Helmuth said of sectarianism: "Sectarianism, ladies and gentlemen, is the offspring of originality, and in many cases the guardian of progress. It has cast down the idols of Paganism, it has overthrown a beautiful but heathen mythology, and set the sun of Christianity to brighten and redeem the world. It has made this country in all its magnificence what it represents today before the nations of the earth, and it has already begun a revolution in the medicine of the Nineteenth Century which is palpable to everyone who can discern the signs of the times, and of which the end is not yet." And what Helmuth said in 1889, is true today and will be so in the future.

Too great unanimity of thought in the learned professions does not favor progress. A strong minority party in medicine is as important as it is in politics, tending as it does to check the premature acceptance of partially developed doctrines or ideas.

If then, for a time we are to remain sectarians or specialists, what is our duty? LET US BE CONSTRUCTIVE:

there, gentlemen, you have the answer in four words. Let us be constructive as to our hospitals, our colleges, our societies and our literature. Let us be attractive and not repellant. In being constructive, let us not forget the necessity for healthy criticism, not the criticism of funereal type sufficient to force the quills of Shakespeare's illustrious porcupine to stand on end, but the criticism of logic, the criticism that is friendly, the criticism that improves both the criticized and the critic.

As to our hospitals, we must see to it that the patients entrusted to our care shall have their cases thoroughly studied and the histories of their illnesses accurately and efficiently recorded, diagnostically and therapeutically. Trustees of hospitals must conform to the demands of the times, and require records to be kept in good shape. They must provide filing systems for the care of such records. Then it will be possible for physicians to analyze and study such records en masse for the benefit of the community at large. Work of this kind is neither degrading nor onerous. It made Osler, and in the making of that greatest of all living clinicians, it made Johns Hopkins Hospital.

As to colleges, again let us be constructive. The men at the helm can never be natural and progressive so long as they are being annoyed by cross fires of captious comment. Many of the critics are basing their opinions on conditions that existed 25 or more years ago, remnants of which are not to be found today. Let us maintain a strong stand for a high degree of preliminary education. No class of men should be of higher qualifications than the physician. Let us insist that all of our colleges shall contain students equal to those in the best of the old school colleges.

Our organized societies were great factors in the uplift of homœopathy, and have done practically everything in the matter of protecting it from adverse legislation when the latter was a great biennial sport. Those days are gone, we verily believe. Our societies must be supported by our membership, our presence, our papers and our discussions. Our officers must feel their responsibility in the work of reconstruction now going on. While being leaders, they must not presume to be disregardful of the general sentiment and advance of the times.

We must continue our study of drug action according to the best modern methods. I know that there are many who are not in sympathy with me in this matter, and who feel that

the materia medica of the grandfathers is good enough not only for the grandchildren but for ages to come. I cannot make a better comparison than that with the furniture of a certain rich and ancient residence. All of it was the type current 60 to 75 years ago when the old couple set up housekeeping. Some of it belonged to the pre-Revolutionary period. It was in excellent condition. The wood work was of the best. It had stood the wear and tear of over half a century. The pictures that graced the walls and the ornaments spread about bore like evidence of antiquity. To the owners, they were as useful as the day they were purchased. The pictures and bric-a-brac carried a sentiment. The owners were satisfied, perhaps justifiably so, as their days were numbered. To the stranger, to the uninitiated, the atmosphere of that household was funereal and unattractive. It savored of lack of progressiveness. No doubt all the properties were good enough for the owners; but would the owners have been satisfied had they not been so shut up in that atmosphere of isolation that they knew little or nothing of other and more modern homes? Gentlemen, we homœopaths do not expect to die tomorrow or next week; therefore let us refurnish; our materia medica is not presented attractively. It is not ornamented along modern lines. That it stands today as the most useful materia medica extant, I, along with all of you, believe; but it will not attract the modern element. The remedy is being applied. Backed by the endowments of the Ohio State University and those of the Hering and Evans Laboratories, Hinsdale, Watters, Haines and Griggs are doing good work. But four men and a limited sum of money will not reconstruct the materia medica for years to come. Much can be done by private research of practising physicians, which of course means ourselves and others. Then we will succeed in building a materia medica mansion attractive to live in, one which will excite a demand on the part of new tenants and will serve as a center for the delight and instruction of our colleagues.

Our mistake is in thinking of materia medica when we mean pathogenesy or pharmacology. We must know drug action from the coarsest to the finest points, objectively and subjectively. When we will have built up such exact sciences, we have constructed studies of drug action which can be used by allopath or homœopath according to his theories as to the therapeutic action of medicines. Drug pathogenesis is not a

matter of the schools. It is plain and accurately defined "study of drug effects." Let the result be what it may; only let it be the truth. Startling drug pictures are not to be expected. Remember that simplicity has ever marked all stages of modern progress. With such a drug pathogenesy, we can win friends. To bring it about, we must live as an organization. A correct pathogenesy can be utilized by all physicians irrespective of therapeutic beliefs.

Our literature must be maintained. This is in the hands very largely of our colleges and of our societies. Again simplicity should prevail. Scarcely more than yesterday, I labored through 12 double column quarto pages to learn what I could concerning the subject matter of the discourse with a reward not commensurate with the time occupied. I was impressed that the writer was a very learned man, that he was well acquainted with Xerxes, Dioscorides, Bismarck, Lloyd-George, Caesar, and Alexander the Great among individuals of eminence; and that he was not wanting in knowledge of the works of Milton, Goethe, Balzac, Cicero, Shakespeare and Demosthenes. That was not what I wanted, nor is it what we want when we take up a medical journal. We want clinical facts.

Every one of us must admit that every other man in this audience is in possession of knowledge in which he individually is deficient. Conversely, each one of us has had experiences which if scientifically presented must surely add to the knowledge of our fellows. Let us take the hint and go to the trouble of engaging in the work. Moreover, it is educational.

It must not be assumed that the proposed reconstruction of pathogenesy means that we must work up entirely new material. It appears to me to be unreasonable to believe that all the patiently acquired knowledge of the past is worthless. Part of the work of reconstruction must necessarily be the separation of the reliable from the unreliable. We must remember that all "city dumps" contain some useful material, and it is now a settled administrative policy to salvage same. So with our old literature respecting drug action. Undoubtedly much of it is worthless and misleading; but there is also considerable that can be depended upon as reliable. The experienced litterateur and physician can readily make the distinction, and so add to our literature by contributing the results of his labors.

Every man does not seem to be fitted for this work, whether by training or mental makeup, is not always easy to decide. In the majority of instances, the defect belongs to the former grouping. Quite recently the Journal of the American Medical Association contained a brief report of twenty cases of camphor poisoning. Here was an opportunity for a study in pathogenesis rendered negative because nothing but the coarsest possible drug effects were noted. Perhaps we are unjust in our criticism, and it may have been that the author recorded all that existed. Personal experience and study of literature lead me to the belief that careful analyses of well recorded clinical histories might have results in much excellent information.

A difficulty under which investigators labor is an assumed notion that they must produce something of dramatic appearance. If it is not dramatic, it is not good, they think. The ultimate results of most human endeavors are dramatic to the dwellers of the past, as shown by the locomotive, the automobile, the aeroplane, the telephone, the telegraph and the wireless. The underlying principles which have made all of these possible are simple. Logical and trained minds have constructed them out of numerous simple units properly arranged.

Gentlemen, in this discourse I have covered a wide range. The majority of the topics presented have been touched upon sparingly. It is possible that some of these may have been pet ideas of some of my hearers, who would have been pleased to have listened to a more liberal exposition of the same. I cannot expect any or all of you to agree with all of my ideas, nor do I. If the matter presented awakens to thought and action, the time spent in preparation and delivery, will, I am sure, have been time well spent.

A New Operative Procedure in Impassable Stricture Without Perineal Section.—F. J. Parmenter (*Internat. J. Surg.*, 1918, xxi, 137) in making the diagnosis of the impassability of a stricture, uses a McCarthy endoscope, after having instilled adrenalin in order to cause shrinkage, so that a catheter or a filiform can be passed. In removing the stricture he employs a special three-bladed knife, with which he makes one cut of half an inch from behind forward. If the stricture is longer than can be overcome by one cut, the endoscope is pushed up through the cut portion; a number 18 catheter is passed through, and the endoscope is withdrawn. Applications of cotton control the hemorrhage. The catheter is left in place for three to five days, and irrigations of permanganate are employed.

A SUBJECTIVE PROVING OF SKATOL.

BY

WILLIAM B. GRIGGS, M.D., PHILADELPHIA.

Director of Constantine Hering Laboratory, Hahnemann Medical College, Philadelphia.

Skatol represents the ultimate end of proteid decomposition and is a constituent of human feces. Its relation to Indol in the various phases of autointoxication prompted the Hering Laboratory to make a proving of this substance and prove its value in certain cases of autointoxication, from a Homœopathic viewpoint.

Merks' Skatol was used in the 6x potency.

The proving was conducted along modern scientific methods; students were used, kept under constant observation with accurate physical and laboratory examinations. Length of proving was six weeks; length of time before symptoms appeared was two weeks. The symptoms given have been carefully analyzed and given wherever possible in the prover's own language.

The following symptoms were produced in nearly all provers and many have been confirmed clinically by my intimate co-workers:

The stomach and abdominal symptoms were the first to appear. After the stomach and abdominal symptoms had begun to appear and develop; a frontal headache began over both eyes, about 2 P. M. Somewhat worse over the left eye, and as it extended backward it markedly increased in severity and also became very much more acute towards evening. This was not affected by noise, light, moving about or eating, but was entirely cleared up by a *short sleep,* "when it was possible to drop off."

Later this headache came on regularly every afternoon, and was *only relieved* by *sleep.* Sluggishness, with absolutely no ambition. Along with this came a lack of concentration and impossibility to study; this increasing more and more as the proving progressed. A marked and overwhelming consciousness of despondency evidenced itself even from the first. This feeling was not of apprehension, but rather of hopelessness.

Desire to be with people. Nerves and sleep. Simultane-

ously with the despondency an irritability manifested itself; very easily peeved; felt mean towards everyone.

Violent desire to curse and swear, was developed during the third week in all provers and several ceased taking the drug at this stage of the proving. Easily tired with slight exertion (was absolutely fatigued one noon time by walking four more squares than the usual distance home). This tired feeling relieved somewhat in the day time by sleep. Sleep at night did not rest; increased desire for sleep; would awake in the morning after a good night's sleep, unrefreshed; at the last of the proving even a much longer period did not rest. Arose in the morning with a "half-doped" feeling. This was entirely contrary when normal before proving.

A sleepiness after lunch meal altogether cleared up during the proving (frequently confirmed).

Mouth.—Toward the last of the proving a coated tongue developed in all provers, yellow in color. Salty taste to all cereals in the morning for two weeks. Awakens with foul taste in mouth.

Stomach.—One of the first symptoms of the drug was the removal of a bad taste in the mouth in the morning in two provers who had this condition for nearly two years before beginning the proving. In several of the other provers this symptom was developed as a foul taste in the morning after awakening; very disgusting to provers.

A great deal of belching, with effort, and with a taste of food previously eaten, this occurring soon after meals; at the last of the proving before meals also, with a tendency to be worse after lunch at noon time. Much increased appetite, not satisfied by even a full feeling.

Abdomen and Stool.—Passing of gas forcibly, mostly after meals. Whereas normally stools were dark in color, with regular movements daily; during the proving the stools were of a light yellow color, tight, narrow, disintegrated into many parts, with obstinate constipation at times, but at other times loose and watery, with no desire more than once a day, at the most. The light yellow, narrow stools had a particularly strong, intensified fecal odor, which became almost unbearable to the prover, and was a persistent symptom after the third week of the proving and has been confirmed.

Urinary.—At the beginning of the proving a burning in the glands after urination. This lasted from three to four

days in succession, but disappeared at the end of that time. During the entire proving a difficulty in voiding urine, with frequent desire and little result.

The urination was frequent and scanty.

Urates were increased.

Urea diminished for at least two weeks.

No other pathological feature was shown in the urinary examinations.

SKIN.—Comedones, or blackheads, and small papules, clinically a type of acne, which had persisted for years, gradually cleared up in two provers.

There were no particular blood changes noticed. At the end of the proving two students presented a mild leucocytosis, ranging from twelve to fourteen thousand.

The odor of the mouth and stool exhalations are similar to Baporia, sulphur poisons.

Skatol proved highly curative in a case of intestinal dyspepsia in a child 10 years old, at Children's Homœopathic Hospital. The child was very much emaciated, developed an afternoon temperature of 100° F., accompanied by excessive drowsiness, foul eructations; also eructations tasting of food eaten; constipated, light-colored, very foul stools; scarcity of urine; bloating of abdomen; generally irritable. After the failure of several remedies skatol was tried in the 8x, with a prompt removal of all symptoms in about one week.

I wish to commend Mr. Geo. D. Geckeler, one of the provers, for his perseverence of six weeks proving. His only reward was having his acne and comedones completely cured.

I believe this remedy, skatol, may help the acne of young folks, who suffer with some degree of autointoxication dependent upon intestinal decomposition.

The proving is an effort to develop the practical efficiency of our materia medica, and the profession is asked to put it to the clinical test in suitable cases.

BLOOD ALKALINITY—ITS IMPORTANCE TO THE PRACTITIONER.

BY

HENRY ALLEN HIGLEY, M.D., BROOKLYN, N. Y.

THE alkaline reaction of the blood is due to the presence of carbonates. The degree of the blood alkalinity in health is regulated by the proportion of phosphates to carbonates—the former being acid and the latter alkaline in reaction. The carbonates always exceed the phosphates in amount and in health as estimated by the Van Slyke apparatus should be present in the amount of from 75 to 50 per cent. When the blood alkalinity is reduced below 50 per cent. such reduction is due to one or both of the following causes:

1—Increase in the amount of phosphates above the amount normally present.

2—The presence of acetone bodies, which are acid in reaction and when present in the blood reduce the blood alkalinity below 50 per cent. even if the amount of phosphates is not increased above normal.

Acidosis, so-called, is that condition in which the blood alkalinity is reduced below 50 per cent., and from the above it is plain that such acidosis may be due to either one of the three following causes:

1—Abnormally high amount of phosphates in the blood.

2—Presence of acetone bodies in the blood.

3—A combination of causes 1 and 2.

The importance to the practitioner of knowing in all cases which come under his observation whether or not the degree of blood alkalinity is normal, is based upon the fact that the blood can only properly perform its functions when its reaction is normal.

It should be specially emphasized that the blood may be normal in all respects and ready to perform its functions properly but still be unable to do so if its degree of alkalinity is below normal. The following diagram will give an idea of the relation of the blood alkalinity to the blood functions and the diseases which their impairment represent:

DIAGRAM NO. 1

	Blood Functions	Clinical Field
Degree of Blood Alkalinity.	Oxygenizing	Anaemias
	Immunizing	Bacterial Diseases
	Nutrition Carrying Waste Removing	Malnutrition Nephritis Diabetes

The practical application in part is as follows:

1. ANEMIAS.—Here it is just as important to know that the blood alkalinity is normal as it is to know the amount of hæmoglobin and number and kind of red blood cells. For both of the latter may be normal and yet the patient suffer from symptoms of anemia, if the blood alkalinity is below normal.

2. BACTERIAL DISEASES.—In order that the immunizing factors of the blood may operate properly, it is necessary that the blood alkalinity be normal. Any degree of acidosis hinders the action of the immunizing factors and lessens the resistance of the patient. In making leucocyte estimations, both total and differential, such estimations are only trustworthy and an index of the patient's condition if the blood alkalinity is normal.

3. MALNUTRITION.—Digestion in and absorption by the intestinal tract may be perfect and yet the tissues be poorly nourished if a condition of acidosis is present.

4. BEFORE OPERATION.—Many operative cases die of acidosis in from 24 to 72 hours after the operation. Extensive observation has conclusively shown that such cases suffer from acidosis prior to the operation and that where the degree of blood alkalinity prior to the operation is below 40 per cent. such post-operative acidosis is practically always fatal. It is therefore plain that every surgeon owes it to his patient to ascertain the blood alkalinity of such patient immediately prior to the operation and that no operation should be performed unless absolutely necessary to the life of the patient if the blood alkalinity prior to the operation is below 40 per cent.

METHODS OF ESTIMATING BLOOD ALKALINITY.

There are three methods of ascertaining the degree of blood alkalinity:

1—By the amount of ammonia in the urine.

2—By the presence or absence of acetone bodies in the urine.

3—By direct examination of the blood by means of the Van Slyke apparatus.

Each of these methods has its field of use according to the circumstances which surround each individual case.

1—By the amount of ammonia in the urine.

As the degree of alkalinity of the blood falls, when such fall is due to an increased amount of phosphates the amount of ammonia in the urine rises. The following diagram will show the relation between such fall and the amount of urine ammonia:

DIAGRAM NO. 2

Blood Alkalinity Due to Carbonates	Normal	Moderate Acidosis	Severe Acidosis	Fatal Acidosis
	75 to 50%	50 to 40%	35 to 15%	Below 15%
Urine Ammonia No Guide in Nephritis	.02 to .1%	.1 to .15%	No Guide	No Guide

From this diagram it is seen that when the patient has no nephritis, a normal amount of ammonia means that the blood alkalinity is normal. When the amount of urine ammonia is slightly elevated the patient is to be regarded as suffering from mild acidosis. When the amount of urine ammonia is above .15 per cent, the urine ammonia is no guide to the degree of acidosis. With the above restriction regarding nephritis the above statements apply to all cases, except where there are acetone bodies in the urine. The test most conveniently used for urine ammonia estimations is the formaline titration method devised by Ronchese. This method gives slightly high figures for urine ammonia but is safe for the purpose here described as the actual amount of ammonia present is always slightly below that which the test gives. It

can be performed by the practitioner in his office in three minutes when the utensils and reagents are at hand.

2—By the presence of acetone bodies in the urine.

All urines which contain acetone bodies mean that the blood alkalinity of the patient is below normal but the amount of acetone bodies present is not a guide to the degree of such reduced blood alkalinity. The test most conveniently used for acetone in the urine is that of Legal. This test may be performed by the practitioner in his office and only requires a few minutes of time.

3—Direct examination of the blood by means of the Van Slyke apparatus.

This method must be used for estimating the blood alkalinity when the formaline titration method for estimating ammonia in the urine would fail to give the correct result. It is a distinctly laboratory method and considerable expertness is required for reliable results. For the test one c.c. of blood serum is necessary.

From a practical standpoint the following rules should be used by the practitioner in estimating blood alkalinity:

1—The direct method from the blood by means of the Van Slyke apparatus must be used

1—In all cases of nephritis.

2—In all cases which show acetone bodies in the urine.

3—In all cases in which the amount of urine ammonia is over .15 per cent.

2—The ammonia estimation in the urine may be used in all other cases and judged as follows:

Urine Ammonia .02 to .1% = Normal Blood Alkalinity.

Urine Ammonia .1 to .15% = Moderate Acidosis.

184 Joralemon Street,
Brooklyn, N. Y.

SYPHILIS OF THE STOMACH: A REVIEW, WITH NOTES ON A CASE OF SYPHILITIC PYLORIC STENOSIS.

BY

S. W. SAPPINGTON, M.D., PHILADELPHIA.

(From the Laboratory of Pathology, Hahnemann Medical College, Philadelphia.)

THE reputed rarity of gastric syphilis was due, until about 1910, to the unfortunate methods of establishing a diagnosis. It being firmly fixed in the clinical mind that syphilis of the stomach was the last thing to be thought of, the physician was often misled into the diagnosis of ulcer or carcinoma and treated on this basis until death ensued or the dissatisfied patient changed doctors, the correct diagnosis not being suspected. Thus at a time when syphilis was exceedingly common and poorly treated enough to supply a fair number of cases of gastric lues, the disease was scarcely entertained as a clinical possibility. And it must be said, in justice to the clinician, that the means for an exact diagnosis were far from satisfactory. Occasionally an opinion was advanced on a clinical basis, the usual history being either the exhaustion of every other gastric diagnosis and the successful employment of specific therapy as a last resort, or the accidental stumbling upon a correct diagnosis by the random use of mercury and the iodides. Glaring signs of syphilis elsewhere of course aided.

The other principal method of diagnosis of syphilis of the stomach was no less faulty. In this instance, the disease was established post-mortem by findings of the supposed classic lesions of the tertiary stage involving the stomach. Discriminating microscopic examination was seldom resorted to and the pathologic diagnosis rested upon gross autopsy appearances, in which the gumma constituted the essential lesion. This was an error which still persists. As Warthin[1] says, "the statements in our text-books concerning the pathology of this infection in its latter stages are based almost without exception upon the occurrence of the gumma, and syphilis of an organ is said to be frequent or rare according to the frequency of gumma of that organ." The syphilitic nature of certain organic lesions of the stomach was thus overlooked or misdiagnosed, malignancy probably gaining while syphilis lost.

During this period, in spite of the aforesaid obstacles, a number of cases of gastric syphilis were reported. The first description of syphilis of the stomach is credited to Andral,[2] who, in 1834, reported two clinical cases with general luetic manifestations in addition to digestive disturbance and complete clearing up of all symptoms under mercurial treatment. Other clinical reports are by Rosanow,[3] Gaillard,[4] Dieulafoy,[5] Mackay,[6] Debuc,[7] Fournier,[8] Einhorn,[9 10 11] Hemmeter,[12] Hemmeter and Stokes,[13] Muller,[14] Lafleur,[15] Jullien,[16] Lenzmann,[17] Hayem[18] and Kohn.[19] Most of these were between 1898 and 1910. Cases based on an anatomic diagnosis were in general of an earlier era. Wagner[20] in 1863, Lancereaux[21] in 1866, Klebs[22] in 1869, Cornil[23] in 1879, Weichselbaum[24] in 1883, Birch-Hirschfeld[25] in 1887, Chiari[26] in 1891, Bittner[27] in 1893 and Stolper[28] in 1896, as well as Murchison,[29] Flexner,[30] Aristoff,[31] Frankel,[32] Gross[33] and Kinsch[34] published accounts of gastric syphilis established post-mortem. In the majority of these cases, both clinical and anatomic, the evidences of syphilis outside of the stomach were so striking and characteristic as to force their attention upon the observer and suggest the like involvement of that organ. A systematic examination of the stomach for syphilis was carried out by Chiari, whose investigations are noteworthy. In 243 cases, 145 of which were hereditary and 98 acquired syphilis, Chiari found two undoubted examples of gastric lues, one hereditary and one acquired. Attention being directed this way, Bittner, from Chiari's laboratory, reported three cases of hereditary gastric syphilis seen in one year. Supplementary to Chiari's work was Stolper's monograph on visceral syphilis in which he reports one case of acquired gastric syphilis found among 86 cases of syphilis coming to autopsy. Twenty-five of these were congenital and sixty-one acquired. Combining Chiari's and Stolper's investigations, we get an incidence of 3 cases of gastric lues in 329 syphilitic patients, about .9%. These figures fairly well represent the frequency of the disease according to expert observation by the older methods. That cases may be overlooked was hinted by Aristoff, who questioned the great rarity of gastric syphilis and emphasized the necessity for careful microscopic examination.

Since 1910, the reported number of cases of gastric syphilis has greatly increased through improved methods of diagnosis. Two of these, the Wassermann test and the X-ray, have

been of the highest clinical importance. The wide application of the Wassermann reaction has led, in positive cases with gastric symptoms, to the more frequent trial of specific treatment with most satisfactory results. Rœntgengraphic studies have shown organic gastric lesions ordinarily suggestive of ulcer or carcinoma but associated with a positive Wassermann and yielding promptly to syphilitic therapy. Anatomic studies, too, have in no small degree aided in correct conceptions. Bits of tissue have been removed at operation and autopsy from lesions suggestive or characteristic grossly of ulcer or malignancy or inflammatory infiltration; careful microscopic examination of such specimens has resulted not infrequently in histologic findings pathognomonic of syphilis. As Warthin has shown, the modern pathologic diagnosis of syphilis is microscopic and the gumma as the essential tertiary lesions is largely a fallacy. Such pathologic reports, finding their way into journals, have stimulated the clinicians to revised views of gastric syphilis.

Of the publications on this subject since 1910, may be mentioned Siegheim,[35] Moren,[36] Mathieu,[37] Myer,[38] Meyers,[39] Villacian and Bazan,[40] Leven,[41] Hausmann,[42 43] Holitsch,[44] Lockwood,[45] Comite,[46] Copelli,[47] Tuohy,[48] Cronin,[49] Morgan,[50] Einhorn,[51] Downes and LeWald,[52] Muhlmann,[53] McNeil,[54] Lensman,[55] Smithies,[56] Fischer,[57] Niles,[58] Clark,[59] Lull,[60] Culler,[61] Eusterman,[62] Rockey[63] and Tousey.[64] Einhorn published an excellent report in 1900, added cases in 1902 and 1909, and again in 1915 discussed the subject with additional cases. Jerome Meyers, in 1912, reported a case and reviewed the literature, collecting fifty-nine cases including his own. Lockwood, in 1913, considered there were only about fifty cases of gastric syphilis on record. Smithies states that before 1910 there were about seventy authentic instances on record. The late increase in reports of gastric lues is brought out by the fact that in 1915 alone fifty cases were reported and ninety cases may be found in the literature for the three years 1915, 1916 and 1917. And this in spite of the falling off of such studies during the great war. Smithies' paper included twenty-six cases and Eusterman's twenty-three.

It is well, however, to avoid the illusion that gastric syphilis is on the increase. As a matter of fact, syphilis of the stomach was and is a rare disease; that is, rare in comparison with other diseases of the stomach and rare compared with

syphilitic lesions elsewhere. Further, while case reports of gastric lues are much more numerous now than previously, this increase is apparent rather than real and due to improved methods of recognition. It is not to be disputed and syphilographers freely admit that the diagnosis of syphilis prior to the Wassermann reaction was wofully inefficient and the treatment of the disease equally bad or worse. It therefore follows that at a time when syphilis was even more common than today, was poorly diagnosed and worse treated, the incidence of gastric lues was inevitably greater. But passing unrecognized, it was considered extremely rare when it was relatively and actually not so uncommon. Now, perhaps, we lean the other way and tend to consider it not so rare because it is diagnostically easily picked up; though really it is rare and with growing efficiency of treatment and prevention will become more so.

The pathology of syphilis of the stomach, according to the older observers, consisted in the gumma in its various stages. Their pathologic reports are instructive, indicating the old inadequacy of treatment with resultant extensive visceral lesions. Multiple gross gummas were present in many organs, notably the liver, the extra-gastric lesions suggesting and strengthening the diagnosis of the gummatous nature of nodules and tumors found in the stomach. Kleb's case, for example, presented gummas of the lungs, liver, stomach and intestines. Weichselbaum's cases exhibited syphilis of the cranium, nose, pharynx, larynx, liver and stomach. Birch-Hirschfeld's four subjects showed multiple gummas of the viscera. In Chiari's two cases, there were multiple gummas of various organs, besides the stomach. Bittner's, Stolper's and Flexner's patients all had gummas of the liver along with the stomach lesions. Now these extreme types of practically untreated visceral syphilis are seldom seen. Instead, the earlier stages or lesions modified by treatment are more commonly met with. For the pathology of these cases, we have to depend more upon the surgeon than the pathologist, for a review of the literature in the past fifteen years gives astonishingly few post-mortem studies of gastric syphilis. Rather is our information derived from physical findings of internists and rœntgenologists and observations of surgeons at operation, together with histologic findings in tissues removed by the surgeon.

For a proper understanding of the lesions of gastric syphilis as well as elsewhere, it is helpful to accept as a basis Warthin's conclusions "that the essential tissue-lesion of either late or latent syphilis is an irritative or inflammatory process, usually mild in degree, characterized by lymphocytic and plasma-cell infiltrations in the stroma, particularly about the blood vessels and lymphatics, slight tissue proliferations, eventually fibrosis, and atrophy or degeneration of the parœchyma." This excellent summary explains in a sentence the gastric process. The infiltration which begins typically in the submucosa exhibits clearly in the areolar tissue the marked tendency to perivascular involvement. Now if you expand this process until microscopically you observe first the cellular invasion of the muscular layer and later the mucosa, always tending to pursue and surround the vessels, you establish certain gross types of lesions and clinical variations. If the infiltration is diffuse, there is a general thickening and stiffening of the stomach wall and the condition may be spoken of as a diffuse syphilitic gastritis. If the vascular and perivascular involvement in such a case become marked there may be local small necroses and multiple ulcers develop. If in areas the cellular infiltration become marked and focal, single or multiple so-called gummas are said to be present. If a cellular accumulation be exceptionally large or several closely adjacent foci fuse, a gross gumma may develop and with rapid necrosis form a syphilitic ulcer in which hemorrhage may be a clinical feature. If the infiltration, focal or diffuse, and its later fibrosis, thicken the stomach to a considerable degree, the aspect of the case, both pathologically and clinically, may be that of tumor, carcinoma may usually be suspected. If the syphilitic process concentrate in the pyloric region, all degrees of pyloric stenosis may result with secondary dilatation and other effects upon the stomach quite similar to those following stenosis of the malignant type. Finally, the peritoneal coat may be reached and perigastritis and perigastric adhesions develop. It will thus be seen that the lesions of syphilis, ulcer and cancer of the stomach may resemble each other closely and that the exact diagnosis becomes essentially a microscopic one. Fortunately the histologic picture of syphilis is fairly a characteristic one and not likely to be confused with benign ulcer or carcinoma. The differentiation from the very rare tuberculosis is perhaps more difficult but by no

means unsurmountable. The finding of the spirochaete naturally is conclusive but we have not been able to find any report of a successful search. In our own case, we were likewise unsuccessful. This by no means militates against a positive diagnosis and is quite comparable to the difficulties encountered in demonstrating spirochaetes in other visceral luetic lesions.

The symptomatic manifestations of this disease, as the pathology inevitably determines and the clinicians uniformly agree, are protean. Lesions which produce the physical signs and symptoms of ulcer with or without hematemesis, of tumor, of pyloric stenosis with dilatation and stagnation, of diffuse infiltration with linitis-like conditions in different cases must present to the casual observer a confusing clinical picture—polymorphism, Dieulafoy states it. Let us assent at once then that these patients present dyspepsia and gastric symptoms resembling closely other diseases of the stomach and point out those findings which are of peculiar diagnostic value.

The age of these patients contributes a diagnostic suggestion when malignancy is simulated, in that the average age of the luetic is less than that of the cancerous patient. Smithies found it 44.8 years for men and 42.8 years for women. Eusterman's cases averaged only 35 years as compared with an average of 43 years in non-malignant ulcer patients and 54 years in carcinoma of the stomach.

A history of lues may be helpful but is not at all essential. Much more important, though frequently lacking, is past or present evidence of syphilitic lesions. Congenital stigmata, characteristic scars, miscarriages, skin and throat lesions, pupillary symptoms, evidences of aortitis, aortic regurgitation or aneurysm, disorders of the nervous system may point the way. The surgeon may find gumma of the liver a great aid in interpretation of the gastric condition.

A positive Wassermann reaction is one of the most valuable of signs and may be expected in the large majority of cases. Certain reservations, however, should be kept in mind. The serologist should be a reliable one: this is not altogether a minor point. The positive Wassermann reaction may be correct but bear no relation to the stomach lesion as in peptic ulcer or cancer. A negative Wassermann does not exclude syphilis. A provocative reaction may be obtained. Properly

controlled the persistent absence of a positive Wassermann tends to throw doubt on the diagnosis.

Of the evidence furnished by the stomach, the most important by far is lowered acidity or achylia. There is almost perfect agreement and marked emphasis on this point by all authors. Smithies seems to be alone in dissenting, but explains it by comparing it with similar findings in carcinoma when the condition is a hopeless and terminal one. In short, he suggests that in the early stages of gastric syphilis there may be little effect upon the gastric acidity but in the late, hopeless stages, the patient is anacidic as in cancer, and that our efforts in both cases should be directed to recognizing the disease before the patients are virtually dying. The great mass of opinion, however, is against Smithies. Eusterman, in his paper, rather effectually answers him in detail, and concludes that "a consistent achylorhydria, in fact achylia, seems almost exclusively characteristic of luetic gastric disease." It is significant that Neugebauer[65] examined 200 syphilitic recruits, 20 to 25 years of age, and in the secondary stage, and found hypoacidity in 62 per cent., while in 18 there was total lack or only traces of free hydrochloric. Hausman, after reviewing 135 cases in the literature, considers doubtfully luetic cases with normal or increased secretion. Clark, after studying Smithies' paper, still emphasizes the gastric achylia. Certainly in well established syphilis of the stomach and probably quite early, diminished acid values or achylia is a characteristic and valuable diagnostic feature.

Findings of minor value are a low formol index and an infrequent Wolff-Junghans reaction as compared with the opposite in carcinoma. Occult blood positives are not infrequent, though hematemeses as reported by Dieulafoy and the older writers are rare at the present day.

The contribution of the rœntgen ray is that of demonstrating organic lesions of the stomach rather than determination of their nature. Gross filling defects and deformities are common but not, of course, specific. Downes and LeWald found three types of change: A small, dumb-bell stomach with open pylorus and rapid emptying except the last traces; second, a similar condition except some pyloric infiltration and delayed emptying; third, an infiltration involving the pyloric region only and accompanied by dilatation of the

stomach. Gross gastric changes shown by the X-ray and not clearly explained suggest the possibility of syphilis.

In a minority of cases, a tumor mass may be felt and requires the exclusion of carcinoma. The resemblance may almost amount to identity. Einhorn has observed that there is absolutely no sign distinctive of gastric cancer, except a microscopic tissue section, which may not be duplicated in a syphilitic tumor. The tumor may be in any part of the stomach. It may be distinctly local or evidenced as a rather indefinite thickening. It may involve the pylorus with practically complete stenosis and marked dilatation as in our case, but Morgan notes that tumors involving the pylorus which do not cause stenosis are oftener luetic than carcinomatous. An additional confusing fact is that the loss of weight in syphilis of the stomach is remarkable even when there is no stenosis or tumor. This emaciation makes the diagnosis lean heavily toward malignancy and when combined with tumor it presents a complex almost conclusive of cancer. We are informed that this loss of weight in syphilis is not accompanied by the cachexia seen in cancerous cases but this is not likely to aid much, especially when we have counter signs such as the absence of free hydrochloric. It is a wise decision in all these cases to employ antiluetic treatment as a matter of therapeutic differential diagnosis. Leven makes it a rule never to turn a stomach case over to a surgeon until syphilitic therapy has been tried. Einhorn recommends similar treatment. The results of specific cases are most striking, tumors disappearing entirely with a rapid gain of weight.

The symptom complex may point toward ulcer but the anacidity of lues discounts this considerably unless we suspect malignant ulcer. The luetic degeneration of a benign ulcer is not so apt to occur as is the development of multiple small truly luetic ulcers arising from the necrosis of focal infiltrations. In these formations we may have a large hemorrhage, but it is not likely. In connection with gastric ulcer, it is interesting to note that Castex and Mathis[66] claim that gastric and duodenal ulcers are due exclusively to syphilis. This startling statement remains to be proven. Eusterman notes that at the Mayo clinic syphilis was associated with benign gastric or duodenal ulcer in only 1-3 of 1 per cent. of their series of over 2,500 operatively demonstrated cases.

On January 1, 1919, there was admitted to the Hahnemann Hospital the patient whose history follows:

Case.—G. T., white, aged 55 years, teamster, single. Admits gonorrhea 35 years ago but gives no history of syphilis. Drinks six cups of coffee and about nine glasses of whiskey a day. Formerly had good appetite but gastric distress has prevented eating. Claims he has lost about 70 pounds.

Patient dates his present illness from four weeks ago, when a man gave him for a drink of whiskey something which "burned him." Since then he has been unable to eat any solid food and suffers continuous pain beneath the lower part of the sternum. No vomiting. Slight cough.

Examination of the patient reveals an emaciated subject weighing a little over 100 pounds. The lungs are negative and the sputum shows no tubercle bacilli. Over the aortic area, there is a systolic and diastolic murmur. Attempts to pass a stomach tube are unsuccessful and an esophageal bougie is obstructed in the lower portion of that tube. In the hospital, the patient began vomiting but the vomited matter shows no occult blood; neither does a fecal specimen. The hemoglobin is 56 per cent.; red cells, 3,930,000; white cells, 11,900. The urine is negative. The Wassermann is four-plus positive. The rœntgenologist, Dr. Frank, reports a narrowing of the esophageal lumen in its lower third and a gastric deformity at the pylorus suggestive of pyloric new growth. The patient died after five weeks in the hospital.

At the *autopsy*, it was noted that emaciation was marked and subcutaneous fat reduced to a minimum. There were a few tiny nodes in the bronchial glands and lungs but no active tuberculosis of any kind. The heart showed no important changes but the entire aorta and the larger blood vessels were in a state of advanced and extreme athero-sclerosis. There was beginning aneurism of the ascending arch of the aorta.

The esophagus exhibited no stenosis but the wall of the lower third was slightly stiffened and measured 4 to 5 mm. in thickness. There was no ulceration in this portion but the mucosa was blackened.

The stomach occupied an almost vertical position, was markedly enlarged and distended with blackish-brown fluid in which there was considerable barium sulphate. The latter taken ten days previously, testified to the extreme stagnation.

Just around the cardiac orifice and continuous with the esophageal infiltration, the stomach wall was thickened up to 4.5 mm. The remainder of the stomach showed little mural change up to about 5 cm. from the pyloric orifice. Here infiltration began again and increased very rapidly up to a sausage-shaped tumor about 3.5 cm. in length completely obscuring and replacing the pyloric ring. This cylindrical mass formed a symmetrical collar with a diameter of from 1.6 to 1.8 cm., narrowing down the pyloric orifice to 1 to 2 mm. The almost complete pyloric stenosis effected the marked dilatation of the stomach which was present and accounts for the stagnation. The gross appearance of the pyloric tumor suggested fibrosis rather than neoplasm. There were no noteworthy glandular enlargements and no nodules of any kind in the liver. Neither was there any scarring of the liver. The rest of the abdomen exhibited no important changes.

Sections were made of the esophagus 4 cm. above the cardiac orifice, of the stomach at the thickened cardiac orifice, the fundus and the middle of the pyloric tumor. The pyloric slides gave no evidence whatever of new growth of any kind. There was atrophy of the mucosa and a very marked infiltration of the submucosa and the muscular layers. This infiltration consisted of mononuclear cells of the lymphocytic and especially of the plasma cell types, characteristically perivascular and new formed vessels could be traced quite a distance perfectly enmantled by the aforesaid cells. This was most marked in the submucosa but the invasion of the muscular layers was also considerable. The muscular layers were quite hypertrophied and this with the cellular infiltration and a certain amount of fibrosis in the submucosa accounted for the pyloric mass. A similar process, more moderate in degree, was found in the cardiac end of the stomach and likewise, though to a still slighter degree, in the esophagus. Sections from the fundus did not show this characteristic infiltration. Sections from the pylorus were stained by the Levaditi method but no spirochetes were found. A section from the lower portion of the thoracic aorta showed a mild degree of perivascular infiltration of the adventitia and media. No spirochetes were found in sections from this part of the aorta. The gastric specimens showed no tubercle formation and no necrosis beyond that of the superficial mucosa.

This case strikingly illustrates the clinical aspects and anatomic effects producible by syphilitic infection of the stomach. The clinical picture *in toto* strongly suggested malignancy as so many of these cases do. The age the loss of weight, the distinctly gastric symptoms, the secondary anemia, the X-ray findings, all pointed in that direction. But in the light of the post-mortem and the microscopic examination, these symptoms are explained.

The apparent obstruction of the esophagus was probably spasmodic in nature, the pathologic condition of the esophageal wall acting as an initiating factor. This syphilitic infiltration of the gullet is still rarer than that of the stomach and we have seen no report in the literature of its involvement. The pyloric lesion, however, was the cause of the patient's death, its mechanical effect upon the stomach being precisely that of a completely occluding malignant growth, namely, secondary dilatation of the stomach and cutting off of food from the intestine so that the patient practically starved to death.

There is not the slightest question in our minds as to the specificity of the lesion. On the negative side, evidences of neoplasm and tuberculosis were entirely wanting. On the positive side, the pyloric sections exhibited a histological picture which was classical of syphilis. Yet clinically, in spite of the strongly positive Wassermann, the correct diagnosis was entirely overlooked. To reduce such errors by calling attention to syphilis of the stomach is the purpose of this paper.

Conclusions.

1. Syphilis of the stomach is rare but is not as uncommon as physicians believe.
2. The conception of the gastric lesion as a gross gumma is an erroneous one: the pathology involves a microscopic cellular infiltration, diffuse or focal, which in its ultimate development produces a clinical picture closely resembling other gastric diseases, notably cancer and peptic ulcer.
3. A positive Wassermann reaction, anacidity or achylia, and demonstrable lesions shown by the X-ray are sufficient evidence for entertaining the possibility of luetic infection of the stomach and should lead to

4. The therapeutic test of anti-syphilitic drugs. The tentative diagnosis may be confirmed by very remarkable improvement. If our suspicions are incorrect, little will have been lost.

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Some Alterations in Distribution and Character of Blood in Shock and Hemorrhage.—Cannon, Fraser and Hooper report their observations in 98 cases of shock and hemorrhage. The examinations were made on capillary and venous blood. The capillary red count was found high in shock, i. e., six to seven million; much higher in proportion than the venous. The discrepancy is greater the more profound the shock. There is evidently concentration and a stagnation of corpuscles in the capillaries. This condition is gradually recovered from in two or three days.

The capillary hæmoglobin readings exceed the venous by amounts ranging from 6 to 29 per cent. When hemorrhage accompanies shock, the capillary red count may be low, but bears the same higher relation to the venous. In hemorrhage cases the red count is usually much lower than in shock alone but is not as low as the pallid appearance of the patient would indicate. There was always a relatively low hæmoglobulin reading, followed by a further fall in the count and hæmoglobin. After operation attended by hemorrhage the same condition of low hæmoglobin as compared with the red count was present. If there was no hemorrhage the hæmoglobin and corpuscles might be higher than before operation, probably owing to loss of fluid from the body.

Both the count and hæmoglobin are raised by transfusion of blood. Intravenous administration of a large amount (2 pints) of hypertonic salt solution may markedly reduce the hæmoglobin content of the blood; half that amount has not had this effect and is safer. Injection of the salt solution reduces the capillary stasis.

As a prognostic sign, continued concentration of the capillary blood for several days is an unfavorable condition. Disappearance of the concentration indicates improvement. Continued dilution of the blood after the fourth or fifth day is ominous.—*Abstract Surg., Gyn. & Obs.*, Vol. XXVII, 1, p. 58.

EDITORIAL

IS THE NEW YORK HOMOEOPATHIC COLLEGE IN DANGER?

One would not ask the above question if he did not think that there was a possibility that the correct answer should be in the affirmative. On June the 5th the annual reunion of the alumni of the New York Homœopathic Medical College will be held. The business meeting will convene at 2 o'clock. In the announcement it is characterized as the most important meeting in the history of the college. The report of the Executive Committee, with Dr. Rabe as chairman, will be presented. It is evident that this Executive Committee has been after funds for maintaining the college and has been successful in great measure, but not sufficiently so to quiet all apprehension as to the future. It is furthermore stated, if at the time of the meeting, the amount asked for has not been subscribed in full, the Dean will recommend closing the college.

We trust most sincerely that the trustees and alumni of the New York College will not permit this calamity to take place. We can sympathize with the feelings of the Dean who does not receive the support of those most interested in the welfare of the institution, namely its graduates. On the other hand, we contend that if a substantial support is given the committee, although the full amount is not fully raised, the authorities of the college should continue their efforts to maintain it.

The persons from whom help should be forthcoming include the alumni, the teachers, and the trustees. The alumni owe a debt to their alma mater by reason of the fact that medical education costs far more than the fees paid by the students to obtain it. In fact the general run of statistics appears to prove that the medical student pays one-half to one-third of the cost of his instruction. Were it not for the fact that the teachers in the colleges worked for a mere pittance or for nothing at all, it is more than likely that students would be found to pay as little as one-eighth or one-tenth

of the cost of college maintenance. Every alumnus, therefore, is a moral debtor of his alma mater.

Again, it is absolutely certain that no physician can afford to permit the college from which he graduated to go out of existence. Just as soon as the direful event happens, the value of his diploma is lessened, and he falls in the estimation of the community in which he practices. It is therefore to his own financial interest that he shall contribute his mite, and more than that, he should interest the laity in the question of the endowment of medical colleges, which after all is the main thing; for unless medical colleges are endowed they must go to the wall. They cannot be supported by the fees of the students.

Enthusiastic work on the part of trustees will add immeasurably to the enthusiasm and support of alumni. It is unfortunate that the laity is not interested in the endowment of medical colleges. That they should be is evident especially in view of the fact that they have given very strong financial support to about everything else conceivable, from endowments of Greek letter fraternities, various denominational enterprises, societies, hospitals, politics, up-raising of special races—in fact about everything except endowment of medical colleges and the creation of funds for furnishing of red-topped and copper-toed boots to the heathen of South Africa. Yet it is to their interest for their own protection and the protection of their families that doctors shall be well educated. We are reminded at this moment of the words placed in the mouth of one of the characters created by Mary Roberts Rinehart. He says, "A man will pay cheerfully a lawyer's fee for $20,000.00 to keep him out of jail for six months, while he kicks like thunder at a doctor's bill for $100.00 for medical services which saved his life and perhaps kept him out of hell forever."

The New York College must stand! It cannot be permitted to close its doors. When we addressed the Alumni Association of that institution on the occasion of the installation of Dean Copeland, we said: "If the New York College closed its doors, the act would sound the doom of organized homœopathy in all its phases, the world over." What we said then we believe to be true now. It is therefore up to every alumnus of New York to get busy; to contribute what he can for the moment and to interest the lay public

in the subject. It is not necessary that he shall go after big sums of money, although of course, large contributions are gratefully received. Small power is great, and many small contributors will make up the big fund that is necessary.

The New York Homœopathic College should furthermore be supported by the laity for reasons other than its homœopathic affiliations. It is one of the few institutions now remaining not affiliated with the large endowed universities. It is organized for the education of medical practitioners. The universities are now giving a course, valuable though it is, which is much more likely to make their graduates cold blooded scientists and teachers instead of practitioners of medicine. The trend of the times is to wipe out of existence the independent medical colleges, and graduate a class of men well trained in hospital work, but utterly incapable of utilizing their medical knowledge where it is most needed, *i. e.,* in the sick room.

In closing let us remind the alumni of the New York College that if their Alma Mater is legislated out of existence, they become graduates of a defunct institution. In their communities it may be said: "Oh, yes, he is a good doctor, but he is a graduate of a college that was obliged to close its doors." The moral is obvious: "Get busy, and keep the doors of the college open. If you do not do this, you will surely suffer a loss of income of not less than 10 per cent."

THE PREVENTION OF DIPHTHERIA.

The United States Public Health Service has published a series of "Keep Well Leaflets," including one on "Diphtheria; How to Recognize the Disease; How to Keep from Catching It; How to Treat Those Who Do Catch It."

The public is warned that of all deaths of children three and four years of age, more than one-seventh are caused by diphtheria. Considering the fact that diphtheria is preventable and when properly treated with anti-toxin, curable, such a mortality is appallingly high and as the leaflet explains, "Most of the children who die from diphtheria really lose their lives because of the ignorance and carelessness of their parents." It is a sad but true fact that in some instances lack of prompt recognition of the disease and delay in the ad-

ministration of anti-toxin by the attending physician are to blame for the loss of a life, particularly in laryngeal diphtheria.

The early diagnosis of diphtheria is not always easy. It is frequently necessary to make a culture in a case of suspicious sore throat before one can be certain of the diagnosis. When the Board of Health reports a positive finding the patient is at once put under strict quarantine but he receives the advantage of early specific treatment, and other children in the family are protected against exposure to the disease. The hardships of the quarantine, or the enforced removal of the patient to a hospital for contagious disease, is therefore more than offset by the benefits accruing to the patient and his family. In order to convince the public of the advantages of modern public health methods it is necessary to educate the same in matters of personal and community hygiene. We are told in the leaflet that diphtheria may resemble "a very mild sore throat, the tonsils and back of the mouth being redder than usual and the person not feeling ill." More frequently, however, it looks like "a more severe sore throat, or tonsilitis with a white or grayish patch, called a membrane, on the tonsils." Therefore, in order to prevent the spread of diphtheria to others it is important always to recognize the disease, even in mild cases. This necessitates the making of a culture from the throat and nose of the suspected individual.

Protective or "immunizing" doses of anti-toxin are advocated for those who have come into contact with the patient. In order not to unnecessarily employ anti-toxin as a prophylactic the Schick test is recommended. The Schick test consists in the injection of a few drops of a prepared diphtheria toxin into the skin and then watching whether a characteristic red spot appears where the injection was made. If such a spot does not appear within two or three days it shows that the person can not catch diphtheria.

Lasting immunity to diphtheria can be obtained by the injection of a mixture of toxin and antitoxin, according to the method of Park and Zingher. The immunity derived from antitoxin alone lasts but a few weeks.

The following summary of personal and bedside hygiene serves not only as a valuable piece of instruction to the mother or nurse, but also points out the physician's duty and acts as

a check on his conduct of the case. The family physician must bear in mind that we are living in an age of publicity and education and that he is expected to keep abreast of the times and look after the interest of his patients in an up-to-date manner.

"Personal and Bedside Hygiene: 1. (a) All discharges from the nose and mouth should be gathered in soft, clean cloths or rags or papers, and destroyed by burning. (b) The patient should cover the mouth and nose when coughing or sneezing, for a cough or sneeze will throw droplets of mucus to a distance of 10 to 12 feet.

"2. The attendant should wear a washable gown that completely covers her clothing. It should be put on when entering the room of the patient and taken off immediately on leaving it.

"3. A basin of water, together with a cake of castile soap (or where possible an antiseptic solution), should be placed in a convenient place, so that the doctor and nurse attending the patient may wash their hands whenever leaving the room, and even before touching the door handle.

"4. All eating utensils that the patient uses should be washed in boiling hot water separately from other dishes and used exclusively by the patient.

"5. All bedclothes and bedding should be boiled in soap and water or should be exposed to the sunshine. Direct sunshine kills disease germs.

"6. The person attending the patient should wear a double layer of gauze or other soft thin cloth across the mouth and nose as a *face mask* whenever near the patient so as to prevent the droplets containing the germs coming from the patient's mouth or throat to the attendant. *Always remember that even though you may not get the disease, if the germs lodge in your throat they may grow there and you may carry the disease to another person who may catch it.*

"7. There should be but one attendant wherever possible.

"8. No visitors should be permitted in the sick room—not even during convalescence.

"9. The one who attends the sick should not prepare or handle the food of others. Sometimes it is impossible to take this precaution, as very often it is the mother who must take care of the patient, cook, and do all the housework. In

such cases the one attending the sick must *never neglect* whenever near the patient—

(1) To wear a face mask.

(2) To wear a washable gown (which is to be taken off on leaving the room).

(3) To wash her hands when leaving the sick room.

"Every attendant on the sick should know how disease germs are carried from the sick to the well. This knowledge should make her more careful, and thus help to prevent the spread of the disease." C. S. R.

PROBLEMS IN MEDICAL EDUCATION: 1. THE TEACHING OF SYPHILIS.

Those not actively engaged in collegiate work have but little conception of the many problems which faculties are obliged to consider. Among the questions forging to the front at the present time is the proper grounding of the medical student in a knowledge of syphilis and tuberculosis, and it has been seriously proposed by the outside influences interested in these subjects, that the various faculties shall add to their organization chairs or special professorships of syphilis and tuberculosis. The matter of syphilis is one of great present importance. It has been the experience of the past that this disease has increased to an inordinate degree following demobilization of large armies. If the future is to be gauged by the past, the medical profession and sanitarians face a great responsibility, which must be met without unnecessary delay.

At the present time we do not believe that the instruction of students in the diagnosis and treatment of syphilis is at all inadequate. On the other hand it seems certain that conditions may be improved to bring greater efficiency. Ample time is given to the subject in the various courses, teachers in charge of special subjects each expatiating upon their own particular themes. Materia medicists teach the action and uses of mercury, arsenaphenamin, potassium iodide, etc.; sanitarians, of social hygiene; the internist, of visceral lesions; the pathologist, of the anatomical changes taking place in various structures; the dermatologist, of the skin lesions, and so on down the list. It is not at all unlikely that the

medical student obtains from 75 to 100 hours of actual training throughout his collegiate course, which in view of the many other conditions to be taken up must be regarded as ample. And yet there is complaint that students are not properly instructed as to the most efficient methods of treating syphilis. A much more rational criticism is that syphilitic subjects do not receive adequate or proper treatment in actual practice. Much of the trouble is probably due to the patients themselves, and considerable more is dependent upon the fact that remarkable advances in syphilo-therapy have been made within the last ten years, and that family practitioners have not seen sufficient of the disease to warrant them, so they think, in studying the details of the new methods and acquiring the necessary technique and experience for practising them.

The problem for the educator is to give the student well grounded ideas as to the fundamental treatment of syphilis. While each teacher has his own particular views as to the most convenient or the best method of treatment, their methods have after all been based upon one principle, that is, to give mercury and other remedies to an efficiency in accordance with the needs of each particular patient. With few exceptions, they have not been dogmatic. The medical student, in listening to the various descriptions, is unable to correlate them, and is only too apt to feel that his teachers are at variance in their teachings. Thus early in his career he becomes hopelessly confused.

The important thing is that students shall have instilled into them proper ideas as to the diagnosis and early treatment of the disease during its initial stages, at which time the patients are the greatest menace to the community if untreated or if treated badly or inefficiently. At this stage the variations from a standardized method are not likely to be great. It is therefore argued that the work of instruction shall be delegated to one man. Such a course is most certain to relieve students of much of their present confusion. But who shall this man be? We contend that he should be one well versed theoretically and practically in the subject, irrespective of his Chair in the college. Urology, dermatology, gynecology, internal medicine, etc., have all presented their claims; but after all is said and done, it is the quality of the man who undertakes the teachings and his breadth of thought

that will bring the result, and whatever else he may be, he must be a good syphilographer, not unmindful of Osler's dictum, "Know syphilis well and all things medical will come to you." To him should be assigned the thorough grounding of the students in the diagnostic, hygienic and therapeutic fundamentals. To avoid later confusion, all other teachers should follow the principles he inculcated or "keep hands off." There should be no teaching at cross purposes.

Necessarily it must be admitted that the many changes wrought by syphilis upon the eyes, ears, nose, throat, nervous system, cardio-vascular system, etc., make it impossible for anybody but one conversant with these subjects to handle them intelligently. The genito-urinary and cutaneous specialists admit themselves unable to make a differential diagnosis practically; so this part of the subject must be left with the teachers handling them up to the present time. None but the specially trained in them can determine the action of remedies and the influence of treatment. Still we must recognize that if the cases are treated adequately in the beginning, according to 20th century methods, the opportunities for observing paresis, tabes, cardio-vascular changes, hereditary infection, etc., will gradually become less frequent, and eventually become a thing of the past.

CONCERNING THE INTERSTATE TRAVEL OF VENEREALLY INFECTED PERSONS.

The Treasury Department has issued an order relating to the above subject addressed to Medical Officers of the U. S. Public Health Service and local health authorities and others concerned. Stripped of its legal verbiage and stated in plain language, the order is intended to prevent all persons who can *possibly* disseminate venereal disease from engaging in interstate travel unless provided with a certificate of state of health by the health officer of the district in which the patient resides; also that on arrival at point of destination, the infected individual *must* report to the health authorities at once, and *must* place himself under the care of a properly qualified physician, and "shall agree to continue treatment until the health officer shall have certified that he is no longer infectious. A certificate of noninfection shall not be issued until the health officer or his accredited repre-

sentative shall have complied with the State Board of Health requirements for release of venereally infected persons."

The order does not specify any penalty for non-observance, but it is to be presumed that it is subject to the conditions governing the observance of quarantine regulations in all particulars. Hence it is not likely to prove to be a matter with which physicians or infected individuals may trifle. Local health authorities cannot treat Federal regulations as a joke without assuming considerable risk.

The order is a wise one. The peripatetic gonorrhoeic or syphilitic is notoriously careless and, it might be added, is too often oblivious of the rights of the community to protection. Were the guilty the only ones who might suffer the consequences of the venereal diseases, we might not interest ourselves in the matter. Knowing, however, as we do, the dangers to innocent men, women and children incidental to syphilitic and gonorrhoeic inoculations (and especially the former), we trust that some way will be found to curb the effects of recklessness of the infected. The order itself will at least have the salutary effect of teaching the public the danger of coming under the ban of the new ruling of the Treasury Department.

DEMENTIA PRECOX AS AN INFECTIOUS DISEASE.

The *Journal of Laboratory and Clinical Medicine* for April, 1919, contains an article by Dr. Gosline of Worcester, Mass., entitled "The Role of Tuberculosis in Dementia Precox." In this article the writer shows that in a certain number of cases at least there is a relationship between mental and physical disorders. In his summary he opens the question as to the possibility of splitting the great dementia precox group into two main groups on the physical side: those of toxi-infectious nature, often tuberculous, and the true degenerative psychosis.

For very many years it has been the accepted belief that dementia precox was essentially a psychic disease. The general experience of those best qualified to judge proves it to be a serious disorder and that so far we have been unable to secure good therapeutic results. With almost unvarying certainty the patient lapses into a more or less demented condition which remains permanent. The group of insanities

included under the term dementia precox presents a symptom complex which may be described as fully characteristic as that of any of the infectious diseases. This has suggested to us the possibility of dementia precox being an infection, in fact as much so as is poliomyelitis anterior. In a couple of cases studied temperature curves and spinal fluid examinations bear out this contention.

This question of the etiology of dementia precox is of more than academic interest. In the earliest stages of the disease it is a prevalent practice on the part of physicians and laity to force the patient out of his katatonic condition to a life of activity, certainly an irrational procedure if we accept the theory that we are dealing with an infection. It would seem to be a much better plan to enforce rest. Indeed it might be stated here that it is the custom of the best conducted psychopathic hospitals of the country to make the rest treatment of dementia precox a routine measure.

To the laity likewise, the acceptance of an infectious disease in place of insanity must bear an important practical aspect. If told that a loved one is insane the opinion is resented and the advice of institutional commitment indignantly declined. If, on the other hand, the possibility of infection which endangers the integrity of the mind is accepted, there will be a readiness to adopt proper measures for the cure.

THE ASBURY PARK MEETING OF THE AMERICAN INSTITUTE OF HOMOEOPATHY.

If deep down in the secret recesses of your heart you have strong convictions and you want to stand courageously and aggressively for Homœopathy and its principles; realize that now is the time for action. Go to Asbury Park, June 15 to 20, inclusive. Join the Institute and take active part in its proceedings.

In arranging for the Rochester meeting of the Institute, a distinguished non-attending member with a grievance was approached to take charge of an important bureau. He was wonderfully equipped for the *special* work of this bureau from long years of practical experience. He had a fine mentality. He was a fluent, easy talker, of commanding presence with a pleasing, magnetic personality. It was a crime to have this man's usefulness in the Institute destroyed. He declined to serve, explaining that his interest had long since lapsed

from the lack of attention and appreciation upon the part of the Institute members, who had failed him in his necessity when chairman of this same bureau, which resulted in a flat, ignominious failure.

Ambitious to make a record for his bureau, he had gathered together a series of carefully prepared papers by a group of distinguished scientists, who attended the session of the Institute at the special invitation of the chairman of this bureau. When the chairman and his group of brilliant, world-renowned writers and essayists gathered together at the appointed time and place, they were overwhelmed with the abomination of desolation, for not a single person was present as audience to listen to and discuss their important and up-to-date papers. It required great effort to convince this gentleman that things had changed at the Institute. He had not been to a meeting for many years. Finally for "auld lang syne's" sake he consented to try once again. With great care he proceeded to arrange a program of vital interest by distinguished outside talent. The careful selection of the proper time and place for the meeting, with a little judicious publicity, resulted in a large, attentive and responsive audience, to the delight and gratification of both chairman and bureau workers.

The above is cited simply to drive and hold your attention to the fact that in recent years things have radically changed in the Institute. Under the new order of government and control this could not have happened. We must all wake up and break away from our "dangerous lethargy" and realize that there is a new and successful leadership in control of our affairs. Our officers and trustees are now selected with great care and discretion. Only properly qualified and personally fitted men and women are elected. The story of the last four or five years has proven them to be thoroughly practical, experienced and reliable, exercising their power and duties with patience and forbearance. They have overcome for us seemingly insurmountable difficulties. They have tied us up to and closely identified us with our Federal authorities. They have given us wise and wide publicity. They have preached with inspiriting authority and personality a propaganda for the faithful that has carried conviction and aroused and won the instant and unswerving support of our wavering and apathetic rank and file.

They have permanently established at Chicago an administrative department which is modern and up-to-date in

every detail, and it is now an efficient instrument for strong and capable management.

They have added to our resourcefulness, and have followed systematically a clear, consistent course, maintaining that the supreme duty before the Institute today is to organize and hold together in a compact, energetic, representative body as large a number of homœopathic physicians as possible; pledged to uphold the principles of Homœopathy, to guard and defend her honor, protect her interests, vindicate her rights and secure the welfare of her institutions.

This movement for federation is to awaken anew the enthusiasm of the profession in homœopathy and to establish relations of mutual trust, confidence and helpfulness. It is the right thing to do, and now is the right time to do it, and our officers and committee men are doing it in a way that commands our respect and admiration. They have been working for years tirelessly and insistently on this great, practical enterprise. Where do you stand? Are you a worker or a slacker? If *you* are not a member of the Institute, it is time for you to shake off *your* "dangerous lethargy."

They call to you for help! What are you going to do? Pass them by? Don't do it! Let yourself come under the spell of their imagination and inspiration. Cultivate susceptibility. Stop being blind, deaf and unperceptive to their call. These men are working for *you* with restless energy, inspiring zeal, with fierce intentness of purpose, to gather us all into one great National Society, to which Federal, State and County authorities will give recognition and listen to with respect. We grow strong and capable when we give ourselves freely, without price. This is your opportunity to give *yourself* to the American Institute of Homœopathy. Do so, by going to the Asbury Park meeting of the Institute, June 15 to 20, inclusive.

If you can't or won't go, the least you can do is to join the Institute and take up your rightful share of the burden and responsibility. Write to the Secretary, Dr. Sarah M. Hobson, 829 Marshall Field Building, Chicago, Ill. Tell her you want to belong. You will receive from her a blank "application for membership." Fill it up as is required and send it back by return mail. Then use a woman's privilege, change your mind and go to Asbury Park for the nineteen-nineteen meeting and victory will be yours.

GLEANINGS

CLINICO-PATHOLOGICAL SOCIETY ABSTRACTS

Reported by J. V. F. Clay, M. D.

Clinical Cases—H. L. Northrop, M. D.—*Acute Pancreatitis.* Male, age 50 years, well developed and of large size. Is a moderate drinker. General health good. Four days ago ate sourkraut and sausage for breakfast. Vomited shortly afterwards and has vomited persistently since. Is hiccoughing continuously. Severe pains in abdomen, especially in upper part. Bowels have not been moved for seventy-two hours. Examination showed epigastric and right-sided tenderness. Sensitive, localized resistance in midline above umbilicus, dull on percussion. Operation revealed several areas of fat necrosis of the peritoneum and an enlarged, hard pancreas. Tube-drainage of gall-bladder and bile duct. Considerable improvement followed this operation. Two weeks later, severe vomiting and marked tenderness of epigastric tumor (pancreas). Second operation, revealing fat necrosis and gangrenous fluid in lesser peritoneal sac, which was evacuated through an opening made in the gastrocolic omentum. Large pieces of gangrenous pancreas were also removed in the same way. The patient improved somewhat after this operation, but one night had an internal hemorrhage, and died a few hours later.

S. B., male, age 20 years. Right arm, just above elbow, was badly crushed. At a sister hospital amputation was advised, but patient refused. Two weeks later was brought to Hahnemann Hospital in a very septic condition. Dichloramine T was used and sepsis controlled. In order to replace extensive loss of tissue, upper part of forearm being denuded down to radius and almost to ulna, a large whole-thickness flap, with broad pedicle, was made on upper abdomen, and stitched to forearm, which was kept bandaged to abdominal surface for two weeks. This entire flap lived, and was then detached from abdominal wall, and the suturing to the arm was completed. Thiersch grafts were applied to raw surface on upper abdominal wall. (This patient was presented to the Society, and the function of the arm was seen to be fully restored. He has returned to his former heavy labor.)

J. McC., male, age 15 years. *Extrophy of bladder.* Widely open mucous surface as large as palm of hand, in hypogastric region. Urine dribbles constantly. Marked epispadias. Inominate bones separated anteriorly for distance of three inches. Patient is very uncomfortable and unhappy. In April, 1918, I dissected out an area of mucous membrane from the open bladder, which included the two ureteric orifices and, after opening the peritoneal cavity through the left rectus muscle I implanted both ureters into the sigmoid colon and closed the wound. I next dissected away the entire remaining mucous surface of the bladder. This is the operation of Maydl. A complete recovery followed, and the patient now passes all urine from

the rectum. He sits down or squats to urinate, which he does four or five times a day, and is very comfortable. The only complication following this operation was a mild ascending infection of the right ureter.

Glaucomatous Excavation.—Dr. Frank O. Nagle gave a practical demonstration of the physiological and glaucomatous excavation of the optic nerve. The microscopic sections showed the physiological excavation to be a depression of the head of the optic nerve through which the retinal vessels enter the eyeball. The physiological cupping of the optic disc is due to bifurcation of the optic nerve fibers behind the lamina cribosa. The glaucomatous excavation was clearly demonstrated by macroscopic and microscopic sections.

Members of the Society who were present easily recognized the glaucomatous excavation as a "hole" in the optic nerve head. This hole breaks the continuity of the retina with the optic nerve, and is responsible for blindness in glaucoma.

Finally, an eyeball recently enucleated by Dr. Harry S. Weaver gave the members of the Society a classical picture of the glaucomatous excavation.

ROENTGENOLOGY AND ELECTRO-THERAPY

Conducted by Walter C. Barker, M. D.

X-ray Visulation of the Gut by Means of a New Intestinal Delineator.—Einhorn (*Medical Record*, March 29, 1919) has devised a new intestinal delineator which would appear to be more of scientific than of practical interest. Briefly, it consists of a specially constructed and peculiarly fine cable which the patient swallows and which is permitted to pass onward through the entire gastro-intestinal tract, emerging finally at the anus. X-raying of the intestines with the fluoroscope and the delineator *in situ* was performed every two hours in a case cited. The entire period intervening between entrance and emergence was four days, during which time the patient experienced no discomfort whatever. To the man on the side lines Einhorn's new delineator would appear to be inferior to usual methods and to be of use mainly in the study of intestinal peristalsis with the aid of the fluoroscope.

Abstract from the Annual Report of the Committee on High Frequency of the American Electro-therapeutic Association, on "The New Surgical Uses of High Frequency Currents, with Special Reference to the Treatment of Surgical Tonsils and Hemorrhoids by the Desiccation Method."—This paper emphasizes the importance of the desiccation treatment of surgical tonsils in those cases where the danger from general anesthetic and surgical excision of tonsils is apparent. The writer has found this method to effect sterilization, to completely or partially destroy the tonsils without surgical shock, hemorrhage, or discomfort to the patient, and with no resulting contracted cicatrix or impairment of phonation. Toxemia, arthritis and other focal infections due to infected tonsils, all clear after sterilization by the desiccation method.

The cases treated were adults, but the writer suggests that children also might be so treated under general anesthetic. He further advises the removal of the diseased portion only, since he believes the tonsils to have a useful function common to all glands.

Malignant and other growth, involving the tonsils or other structures

of the oral cavity, were treated by the electro-thermic method, preferably under ether.

Technic—The patient sits in a chair with a head rest to prevent involuntary movements, and natural light is used when possible. All the reflexes in the throat are destroyed by the application of four to ten per cent. solution of cocaine, allowing sufficient time for complete anesthetization.

The electrodes used are made from knitting needles cut to five or six inches in length, one bent about one half inch from the end to an obtuse angle, another to a right angle and the other to an acute angle, and insulated almost to the active end with adhesive plaster. The Oudin current from a standard high frequency machine is used, regulated to a point that will desiccate and not cauterize the tissue. The electrode should be brought in direct contact, or even inserted into the tonsil while the current is passing, in order to dehydrate to a sufficient depth.

It is desirable to destroy all of the diseased portion at one sitting, and the heat penetration is usually sufficient to sterilize the entire tonsil even where only a portion is destroyed. The writer has never seen a case where secretion or infection was sealed by this treatment, although theoretically, such may occur, in which case the tonsil must be treated again. No great discomfort follows this operation because there is but slight injury to the tonsil and adjoining tissue, and consequently but little secondary inflammation.

Hemorrhoids, both external and internal, may be removed by the desiccation method. Advantages claimed by the writer for this treatment are its accomplishment under a local anesthetic and the non-occurrence of secondary hemorrhage. External hemorrhoids are removed by the same technic as any benign tumor.—*American Journal of Electro-therapeutics and Radiology*, Sept., 1918.

UROLOGY

Conducted by L. T. Ashcraft, M. D.

Complete Postoperative Anuria after Nephrectomy in a Case of Solitary Kidney.—R. Pazos Varela (*An. de Fac. de Med.*, Lima, 1918, I, 125) reports an interesting case in a girl of sixteen years. There was discovered an enormous fluid tumor in the right lumbar region. She complained of frequency of urination and polyuria, and the tuberculin reaction was positive. Blood was present in the urine. Diagnosis of tuberculous pyonephritis was made. The right ureter was easily catheterized but the left ureteral orifice could not be found. Therefore, it was decided to leave a permanent sound in position for ten hours, as it was believed that by this means it would be possible to collect the urine from the two kidneys separately. When the supposed separate urines were examined, the result led the author to decide to perform an operation on the right kidney. This organ was of immense size, and the urine from it was purulent and slightly bloody. It seemed to be completely diseased, and there was a calculus blocking the ureteral opening. The kidney was, therefore, removed. The immediate results of the operation were good; but at the end of forty-eight hours the patient showed symptoms that led Varela to make a cystoscopic examination. As no left ureteral orifice could be found, he decided to explore the left kidney. He failed to find it, and it was apparent that the case was one of solitary

kidney. After this, the patient's condition remained quite good for four days; but on the sixth day, the amount of urea in the blood was 50 c. gm. to the liter. It was not until the twelfth day that signs indicating the gravity of the condition were seen. These were followed by a coma that lasted for six hours, ending in death.

A Method of Dealing with the Divided Ureters When Implantation into the Bladder is Impossible, or when that Viscus is Absent.—W. B. Bell (*Lancet*, London, 1918, CXCIV, 838) states that it is very unscientific to implant a ureter into the intestinal canal, because it is always full of bacteria. He has devised the following operation, which is performed in two stages and sometimes in three:

A suprapubic incision is made in the median line; the anterior branches of the internal iliac arteries are ligated; a loop of the ileum eighteen inches long, with its mesentary, is isolated; and anastomosis is made, to carry on the function of the intestinal tract. The apex of the isolated loop of intestine is attached superficially to the fundus of the bladder. The two ends of the loop are then brought out, through stab wounds in the abdomen, and fixed in position on each side. The central incision is then closed. Subsequent to the operation, the loop of bowel is irrigated twice daily with Milton's fluid. When the cultures are negative, the second stage of the procedure is done.

A self-retaining catheter is placed in the bladder. The abdomen is reopened, and the loop of bowel is detached from the bladder. The ureters are divided at the brim of the pelvis, and implanted into the isolated loop of bowel. The entire carcinomatous area is then removed, including the base of the bladder. The remaining part of the bladder is closed with two layers of catgut, and the apex of the loop of bowel is anastomosed with the highest remaining part of the bladder. The ends of the bowel may be closed at this stage; but if it is desired to leave them open for lavage, a third operation will have to be performed later, in order to close them. This method may be modified in order to meet the special conditions of any particular case.

Kidney and Ureter Abnormalities.—T. N. Hepburn (*Annals of Surgery*, Philadelphia, 1918, LXVIII, 294) makes a report of two unusual cases of abnormalities of the kidney and ureter. The first was in a multipara thirty-one years of age, who had been ill for four years with pain in the right kidney region, where there was found a large tumor. On cystoscopic examination, the right ureteral orifice was found to be slightly dilated. Purulent urine was coming from it. The catheter could not be passed any further than three centimeters up the ureter. X-ray showed the right kidney to be enlarged. The left appeared normal. The right kidney was removed. The right and left ureters were found to be fused together. After carefully dissecting the ureter down for three inches, Hepburn ligated it above its point of fusion with the left ureter. Although the patient recovered rapidly from the operation, pus continued to drain from the wound. A test made with indigo-carmine showed purple urine coming from the single ureteral orifice on the right side. The dye was also present in the urine from the right lumbar wound. A second operation was performed. A median suprapubic incision was made, and the bladder end of the ureter exposed. The two ureters were found to be fused just outside of the bladder wall. The

right ureter was ligated close to the point of fusion, and a rapid recovery ensued.

In the second case, a woman of forty-five years had had pain in the right side for many years. Palpation revealed a tumor in the upper right abdominal quadrant, extending over the right iliac fossa, and one inch beyond the mid-line. X-ray showed an indefinite outline of a large tumor in this situation. On cystoscopic examination, two ureteral openings were seen on each side, one above the other. Each of the four ureters was catheterized separately. The urine from the lower ureters was normal. That from the right upper ureter was very purulent. The X-ray showed a duplication of ureter and pelves on each side. Under ether anesthesia, an operation was performed on the right kidneys. Although the lower right kidney was normal, it had to be removed with the pyonephrotic upper right kidney because the tumor so enveloped it as to make it dangerous to separate the two organs. The patient made a good recovery.

Two Instances of Kidney Calculi: One Exhibiting a Sequela of Primary Carcinoma and the Other of Persistent Sinus Formation from the Ureter to the Epidermis.—J. E. Davis (*J. Mich. St. M. Soc.*, 1918, XVII, 387) reports two interesting cases of renal calculi. The first patient, a man of forty-seven years, began to have painless hematuria in August 1915, the attack lasting, off and on, for about three weeks; after which he began to have some pain in the left hypochondrium, radiating into the bladder and testicle. In the following October, he began to have severe hemorrhage in the urine. About a week later, he had the first attack of severe pain, which was situated in the left hypochondrium. Physical examination revealed him to be very weak and cachectic, with slight tenderness over the upper left abdomen and over the urinary bladder, and very marked tenderness over the left abdomen. There was swelling and tenderness of the left testicle. The urine contained pus and blood cells, together with a small quantity of albumin. Cystoscopy showed retraction about the left ureteral orifice, and obstruction was felt in the upper part of that ureter. The phthalein test revealed delayed function, and pyelography showed two free stones in the left kidney pelvis. On November the 6th, a lumbar nephrectomy was done. The kidney was found to be separated into two cavities, and a primary alveolar carcinoma was found arising from the pelvis. The patient recovered. The following August, he was operated for left inguinal hernia and varicocele, with the hope of relieving pain that had developed in the left groin, radiating into the testicle. This pain was not relieved by the operation. By February 1916, the condition of the patient was quite bad. He could not straighten his left leg without its causing him a great deal of pain, and he had pain almost constantly in the left lower abdomen. On palpation, a firm, immovable, nodular mass was revealed. An exploratory operation was performed, which revealed a large mass in the left prerenal region, extending from the lower border of the twelfth rib to the anterior superior spine of the ilium and more than filling the left kidney fossa. Two weeks after this operation, the patient had a large hemorrhage from the laparotomy wound. About a week later, he had a severe chill followed by a temperature of 103.2 and a pulse rate of 128. Four days later the patient died of sepsis and heart failure. Postmortem examination showed a small septic antemortem thrombus in the right ventricle; and in the left abdominal cavity, a small amount of serous fluid, and a very large medullary carcinoma.

The second case occurred in a married woman of forty-two, who had had eight children. In August 1915, she complained of edema of the right foot and leg and pain in the back. This condition occurred at irregular intervals for ten months, at the end of which time she had a sudden attack of chill, fever and pain in the back. In July 1916, an operation was performed for kidney calculi and abscess; more than a pint of pus, with a great many calculi, was removed through the abdominal incision. Two months later, a second operation was performed, for drainage of perinephritic abscess. The patient was discharged from the hospital on October 3rd, but returned five weeks later on account of a recurrence of the perinephritic infection. Another operation was then done, half a liter of pus being evacuated through a post lumbar incision. Six weeks later, when the patient was free from infection, an exploratory operation was done with the idea of removing the tissues causing the repeated abscess formation. No kidney tissue was found remaining and the tissues around the end of the ureter, which was patent, showed cloudy swelling and some areas of fibrous change. The pathological tissues were removed, and cauterization of the ureter was attempted; but the ureter was not obliterated, as was shown a few weeks later by catheterization and the injection of collargol through the catheter. The collargol passed from the end of the catheter to the outer opening of the sinus through the epidermis in the post lumbar region. The patient made a prompt recovery, and is still in good health.

A New Operation for Epispadias.—H. H. Young (*Journal of Urology*, 1919, II, 237) states that the most popular operation for this condition has been that of Cantwell. The author has recently developed a procedure somewhat different from this. The case that he reports is one that needed separation of the corpora cavernosa with transplantation of the new urethra. In doing this, the most important thing was not to interfere with the blood supply of the skin transplant. This was left attached along its entire length by a broad connection to the left of the corpus cavernosum. This structure was then rotated with the new urethra so as to displace the latter to its new position under the corpora. The transplantation was successfully accomplished, and the corpora were separated, being held together only by the skin on the under surface of the penis. There was thus produced a very deep groove, into which the urethra was to go. The left corpus had been mobilized, so as to allow it to be rotated, taking with it the urethral graft. A continuous chromic catgut suture was employed to close over the roof of the urethra. By this method the newly formed urethra is shifted into position beneath the corpora cavernosa by bringing together the two corpora above it. To complete the operation, a dorsal line of sutures is used to bring together the two halves of the glans, and approximating the edges of the skin along the dorsum of the penis. In the two cases in which Young has performed this operation, he has secured excellent results.

Scrotal Skin Grafts in Severe Injuries of the Penis.—S. R. Benedict (*South. M. J.*, 1918, XI, 438) reports an interesting case of a man who had had an electric burn removing all of the skin of the penis with the exception of a narrow strip on the under surface. This wound was repaired, with excellent results, both cosmetic and functional, by means of the following operation: A granulating surface free from infection and necrotic tissue was secured, and a flap half as large again as the area to be covered was cut the

full thickness of the skin of the scrotum down to the knot including the dartos. The flap had a very large base, which was not all severed at one time, but in two operations, about a week apart.

Treatment of Simple Hydrocele by Filiform Drainage.—Chaput (*Le Monde Med.*) believes this method to be much better than the procedures in common use. He employs two solid rubber L-shaped pieces of fair size, placing them in the lower and upper cul-de-sacs of the vaginal sac, respectively; or else he uses a solid drain in the form of a tennis racket. The operation is practically without pain, no anesthetic at all being necessary. Iodine should not be employed, on account of its irritating properties. An incision three or four centimeters long is made over the tumor. The two ends of the vaginal membrane are grasped with Krocher's forceps. A number 16 rubber tube is introduced into the lower incision and pushed into the upper cul-de-sac; and another is introduced into the upper incision and pushed into the lower cul-de-sac. The ends of the drains, which cross each other, are held with safety-pins, and cut off close to the skin. Dressings are then applied, which are changed in from two to eight days. At the end of three weeks, the drainage can usually be dispensed with. This method does not subject the patient to any of the usual post-operative risks. The patient is not obliged to remain in bed, and is soon able to return to work. The procedure is nearly always curative, and is never followed by recurrence.

Cases of Kidney Calculus Observed at an Urologic Center.—Rocket and Boulouneix (*Les cas de lithiase renale observes au centre urologique de la XIV region: J. d'urol.*, Par., 1918, VII, 225) state that since 1915, they have seen thirty-four cases of stone in the kidney and ureter among soldiers, only five of which were not infected. Twenty of these thirty-four cases were kidney calculi alone; two involved the kidney and ureter, and three were in the ureter alone. Six of the cases were bilateral. The authors believe that this condition is very frequent in young persons, and that it may often exist without symptoms, only the appearance of infection revealing its presence. They ascribe the occurrence of symptoms to the hard life in the trenches, the excessive use of meat, the fatiguing journeys, and the jolting over uneven roads, thus disturbing the calculi, and producing traumatism and inflammation, with subsequent infection.

Many cases of kidney lithiasis are of congenital origin, and the authors make a plea for the systematic practice of radiographing the entire urinary tract of patients who complain of kidney trouble. They believe that this would reveal an increased number of cases in which calculus is the cause of the disturbance. In ten of the thirty-four cases, an operation, either nephrotomy or pyelotomy, was performed, the kidney being closed without drainage. None of the patients with unilateral stone died, but three of those with bilateral calculi did so. In only one of the three were both sides operated upon. The patients lived for three and fifteen months, respectively, after the operation. In one case, the cause of death was uremia; but that in the other case was not determined.

PAEDOLOGY

Conducted by C. Sigmund Raue, M. D.

The Care and Feeding of Premature Infants.—The successful rearing of and feeding of the premature infant is a difficult matter and requires both experience and good judgment. We therefore welcome the excellent paper by Prof. Jos. P. Cobb of Chicago (*The Journal of the American Institute of Homeopathy*) from which the following valuable observations are abstracted:

"Babies born before the seventh month of life will usually die within a short time after birth. Occasionally, however, children as young as 6½ months have been saved and have become vigorous and useful members of the community. The outcome depends upon two factors—its vitality and its care. Its vitality, of course, depends upon several factors, among which may be mentioned, as of first prominence, the degree of health of its parents, especially its mother, and the degree of nourishment which it has received, and which of course itself depends in part upon the mother's health. The factor which we should consider of greatest importance, in the prognosis with reference to vitality, is the question of the degree of atelectasis that is present. Premature babies invariably have small areas of atelectasis. The lower the vitality the greater in extent these areas are liable to be. Again, if the baby has the factor of hereditary syphilis, the atelectasis is apt to be an important and determining factor in the inability to respond.

"If the temperature curve is normal, the baby's chances of improvement are good. If, however, we find wide variation in the baby's temperature, sudden drops with the least exposure, and sharp rises in temperature as the result of the application of artificial heat, the outlook is less favorable The actual weight of the child, also has a bearing, and few babies that weigh less than four pounds have organs sufficiently developed to functionate to the extent that they can maintain an independent existence.

"The treatment divides itself into three heads, namely: first, the question of heat and the maintenance of a steady temperature; second, care to protect the child from unnecessary irritations in its new surroundings; third, the question of nourishment.

"A great many methods have been recommended for the maintenance of an even temperature by the use of heat artificially applied; incubators and brooders, and incubator beds of various types and patterns have been recommended. It is the observation of the writer that just about as good results can be obtained in an ordinary crib, properly protected, in a room where the temperature can be maintained at a steady high temperature, as can be obtained by the use of any of the incubators or brooders recommended by the different manufacturers. If one is doing his work in a hospital, with the assistance of a nurse trained in the care of the same, the incubator or brooder may be very satisfactorily employed. But in the ordinary house, with the ordinary unintelligent assistant, the results are not uniformly satisfactory. By an incubator bed is meant a bed that is protected over its sides and over a part of the top with properly placed drapery that is impervious to currents but yet allows the circulation of air. The maintenance of an even temperature within this semi-tent is easily accomplished by hot water bottles, or still better, by an electric pad, kept at an even temperature.

"In the early days of infancy, it is desirable that this temperature should

be high and range between 80 and 85 degrees; but it is equally important that fresh air and clean air should have access all of the time to the tent. The important point that we should keep in mind, with reference to the question of heat, is that the child has no subcutaneous fat; that its radiating surface is large for its weight, and that its loss of heat, if exposed to an ordinary temperature, is much more rapid than that of the normal infant. Therefore, the temperature in which it lives should be kept 10 or 15 degrees higher than that required by the normal baby, and artificial heat should be maintained not in spasms but regularly at an even temperature.

"In protecting the child against irritations by its new surroundings, we should bear in mind that as little handling as possible is desirable; also that unnecessary movement taxes its resistance. Its organs of special sense should not be subjected to shock or strain. Noises and bright lights are to be avoided. Care also is to be used that the child should be tired as little as possible by its necessary attention. The daily oil bath, with very little rubbing, little water and that only for actual cleanliness should be the rule through the first few weeks.

"The question of *feeding* is the real problem. I think it goes without saying in this audience that even for the premature baby the most important food, if it can be obtained, is mother's milk. It is frequently the case, however, that one of two conditions exist—either that the mother has no milk during these first few days or weeks of the separate existence of the premature baby, or the baby has but little power to extract the same from the mother's breast. In either case the solution is easy, when we are dealing with the infant in the hospital and usually at home. If the mother has milk in the breast and the child is too weak to suck, it can be obtained with the pump and fed to the child with a dropper or a breck-feeder. If the mother has no milk, or the milk is slow in coming, it is usually the case that some may be borrowed from the surplus supply of some other more fortunate baby. If, however, it is impossible to obtain such a borrowed supply, it is my conviction, after observation of a good many cases, that the most satisfactory food, to begin with, is a whey mixture which is low in fat and casein. Whey contains a little more than half of the food value of milk and contains that part which is most readily absorbed and appropriated, requires the least effort for digestion and furnishes calories as readily as any food that can be obtained. It is easy also to increase the food value of whey very gradually, by adding small percentages of fresh cream to the whey itself.

"While the average baby at birth, or within the next few days after birth, will require an ounce of milk at a feeding, and only requires to be fed, after lactation is established, at a three or four hour interval, the premature infant will be able to take only from ¼ to ½ ounce at a time, and that even of a food much below normal in its food value, and therefore will require to be fed at an interval of two hours or less during the first two weeks of its life. The amount, of course, can be steadily increased in accordance with the infant's ability to take care of more and more food. If the baby, after the first few weeks, does not do well on the artificially prepared food and the mother has no milk, it is the child of all children who is entitled to the services of a wet nurse, if a satisfactory individual can be obtained.

"It would not be right to close this question of the feeding of the premature infant without referring to the question of gavage, which can be

very readily and easily done, and which if applied patiently and carefully has saved the lives of a good many children who did not exhibit at first the ability to swallow."

Asthma in Children.—Diestro (*Archives Espanoles de Pediatria*, Madrid) reviews the features which differentiate asthma in children from the attacks of suffocation with the exudative diathesis and spasmophilia, which resemble but are not true asthma. He describes four cases of the latter in children from 8 months to 9 years old, previously apparently healthy. Two of these children were of the same family and the attacks came on at the age of 6, when the children were taken from Madrid to a northern summer resort. The mother was subject to similar attacks, and the characteristic crystals were found in the sputum of all three. The infant's dyspnea and cyanosis were extreme and a gouty taint was evident in this family. In all the children the attacks grew less severe and less frequent, and the children seemed to outgrow the tendency in from two to four years. In one of the cases true asthma coincided with enlarged tuberculous glands in the mediastinum, but the crystals confirmed the diagnosis. Infarcts in tuberculous mediastinal glands induced in some other children attacks deceptively resembling true asthma, and improving under tuberculin treatment. One of the children died of meningitis a year later. Children with the exudative diathesis may present recurring tracheobronchitis or attacks of asthma. Such children usually have noisy breathing, the mothers saying that it is the "noise of the phlegm." This is persisting, but the acute disturbances resembling asthma may alternate with skin manifestations. In one infant the eczema and the asthmatiform disturbances ebbed and waned alternately, unmodified by any measures but finally disappearing, the child as it approached the age of 5 being in apparently good health. In another infant, 4 months old, the enlarged thymus induced cyanosis and tendency to suffocation suggesting asthma. At first they occurred only when the child was crying, but later they became almost continuous. The parents would not consent to operative measures and the outcome is not known.—*Journal American Medical Association*, February 8, 1919.

Vaccine Treatment of Whooping Cough.—Luttinger believes that high doses of pertussis vaccine administered at proper intervals are efficient for the prevention and cure of whooping cough. Of course he advises the usual precautions regarding fresh air and the regulation of diet. The doses he recommends for a child one year old are the following: half a billion, one billion, two billions, four billions, eight billions, and sixteen billions. The vaccine is administered hypodermically with an ordinary glass hypodermic syringe on alternate days excepting between the third and fourth days, when an interval of five days is ordered for recuperation. For prophylaxis the first three doses are sufficient.—*New York Medical Journal*, Feb. 22, 1919.

Diabetes Insipidus in Children.—Clausen (*American Jour. of Diseases of Children*, Sept., 1918) reports a case of diabetes insipidus occurring in a boy nine and a half years old. An interesting observation was the striking relief of symptoms following the injection of extracts of the posterior lobe and pars intermedia of the hypophysis cerebri. The results obtained were as follows: A marked diminution of urine volume occurred after the injection of from 0.25 to 1 c. c. of surgical pituitrin. The therapeutic effect lasted

about six hours. The volume of night urine is diminished following an injection of pituitrin on the preceding day. There is also a reduction in the elimination of the amount of chlorides. The elimination of urea, on the other hand, is not affected by pituitrin injections. The same holds good for uric acid and creatinin, which are only slightly reduced after pituitrin injections. There is evidently no increased elimination of any of the urinary solids. Clausen sums up his observations by the conclusion that pituitrin injections in diabetes insipidus control urine output primarily and thirst secondarily.

GYNECOLOGY AND OBSTETRICS

Conducted by Norman S. Betts, M. D.

Transduodenal Lavage in the Treatment of Postoperative Ileus and Eclampsia.—M. E. Jutte (*Journal of American Medical Association*, March 29, 1919) reports six cases of postoperative ileus, a case of incessant hiccup and one of puerperal eclampsia which were successfully treated by transduodenal lavage, every life being saved. This procedure is carried out by inserting a duodenal tube just beyond the pyloric muscle and allowing a sufficient quantity of fluid to run through the tube into the bowel to produce a thorough flushing. The fluid must be slightly hypertonic so as to remain unabsorbed in its passage along the intestinal tract.

The eclamptic case, after a protracted period of vomiting during pregnancy and after parturition, had complete suppression of urine and general edema. She had been in coma for twenty-four hours when transduodenal lavage was performed. This was repeated in eighteen hours and was shortly followed by a free flow of urine and a rapid return of consciousness.

The author quotes McDonald as having reported twelve cases of toxemia of pregnancy successfully treated by one lavage each.

Irritable Bladder in Women.—C. A. L. Reed (*Journal of the American Medical Association*, Vol. 72, No. 5). After a brief resume of the most common causes of irritable bladder in women, the author describes a rare type of bladder ulceration which G. L. Hunner has previously reported under the name "elusive ulcer." Reed prefers the name "punctate" ulcer of the bladder for this condition and has seen four cases, three of which he has operated with good results. He uses Hunner's own words in describing the cystoscopic picture in these cases as follows. On cystoscopy, one's attention is not infrequently first arrested by a glazed, dead white appearance of a portion of the bladder mucosa. In such an infiltrated area the vessels may have a broken or "choppy" appearance, only short segments of vessels appearing in the extra pale surface. One may see a dead white scar area with a small congested area in the immediate neighborhood; and while one is examining this area, or after one has touched it, the congestion becomes marked and may even begin to ooze blood. Sometimes an area of edema appears, the mucosa taking on a deep red congested appearance and being raised above the general mucous level. This area of edema may occur immediately about the ulcer area, or it may appear on a portion of the wall at some distance from the ulcer. It may be absent at several consecutive examinations and then appear at a subsequent examination. It is particularly likely to be seen if the patient is in the midst of an unusually bad period of bladder symptoms with strangury.

The cause of this condition is not fully understood. Hunner considered that it might be a manifestation of focal infection. The pathology seems to be a chronic interstitial cystitis involving to a greater or lesser degree all of the bladder coats. In certain very limited areas this interstitial process encroaches upon the epithelium, and by cutting off the capillary supply causes macular necrosis. These cases show absolutely no tendency to spontaneous recovery and so-called conservative methods of treatment are without result. Excision of the ulcer bearing area appears to be the only rational method of curative treatment.

Influenza in a Newly Born Infant.—I. A. Abt (*Journal of the American Medical Association*, Vol. 72, No. 14) reports a case of fatal influenza in an infant born two weeks before term of a mother who was in the acute stage of the disease. At birth the baby presented symptoms of respiratory infection which grew rapidly and progressively worse, leading to the death of the infant on the third day. The necropsy revealed a widely disseminated infection, with minute hemorrhages and hemorrhagic bronchopneumonia, as well as septic endocarditis. Streptococci were obtained abundantly from all the organs examined.

Torsion of an Enlarged Hydatid of Morgagni as the Cause of an Acute Abdominal Disturbance.—C. H. Waters (*Journal of the American Medical Association*, Vol. 72, No. 15) reports a case simulating acute lower abdominal infection which operation revealed to be one of torsion of a large hydatid of Morgagni.

An unmarried virgin was suddenly seized with cramping pains in the lower abdomen, especially on the left side, accompanied by severe vomiting and extreme prostration. The temperature was 101; the pulse, 130. The abdomen was rounded, moderately tympanitic with tenderness on pressure, most marked in the left hypogastric region. There were spasm and moderate rigidity of the rectus on this side. Rectal examination was negative except for left sided tenderness high up. Urinalysis was negative. Leucocytes were 16,800 with a polymorphonuclear percentage of 86. The past history disclosed nothing to assist in diagnosis.

At operation a small amount of blood tinged serous fluid was found in the pelvis and a large hydatid of Morgagni, the size of a large olive, was discovered. It was purplish black and had a pedicle one and one-half inches long which was twisted in one complete turn. Both ovaries were enlarged by multiple atretic follicles. The pelvis and abdomen was otherwise normal. Both ovaries were partly resected, the hydatid and appendix were removed and the patient made an uninterrupted recovery.

DERMATOLOGY

Conducted by Ralph Bernstein, M. D.

Cutaneous Metastases in Hodgkin's Disease.—H. E. Alderson, of Stanford University Medical School, reports an interesting case in which the cervical, axillary and mediastinal glands were involved. Painless tumors, which were hard, immovable and inflammatory, and which later softened and broke down, appeared on both legs during the course of the disease, leaving ulcers so like syphilitic gummata as to be clinically indistinguishable. Application of the Coolidge tube (Roentgen therapy) to the lesions caused

a rapid filling in of the ulcers, and sections of tissue taken from the edge of one of the ulcers showed the condition to be metastatic Hodgkin's disease of the subcutaneous tissue and skin.—*Jour. Cut. Dis.*

Late Urticaria Pigmentosa.—Decided predilection for infancy and early childhood is a marked characteristic of this affection of the skin. During 1902 Blumer observed 83 cases, of which over 67 per cent. began before the age of six months, and 71 per cent. during the first twelve months. However, while the disease is still considered one of infants and children, there has been a proportionate increase in the number of cases reported beginning later in life to the increase in the total number of cases observed. Graham Little compiled a table of 142 cases in 1905, and of this number approximately 14 per cent. began at or after puberty. M. B. Hartzell reports having recently observed two adult cases, both of which presented rather unusual features. The first case was that of a man 28 years of age. The eruption evidenced itself as small, round and oval, brownish-red and brown macules and slightly elevated maculopapules; the eruption was diffuse, the face being the only part free therefrom; and upon rubbing the lesions became elevated and slight dermographism was present. The affection started five years previous to Hartzell's observation, following an attack of the "hives," the exact time elapsing before the appearance of the pigmentation being indeterminate. Case two was that of a young woman 26 years of age, which came under Hartzell's observation in 1917. There was a slight eruption of small, oval and round, brown macules, some of which were slightly elevated, and it was confined principally to the flexor surface of both forearms, although a few spots were present on the face, chest, legs and feet. In neither of these cases were there any subjective symptoms, and the clinical diagnosis was confirmed by a microscopic examination of the lesions.—*Jour. Cut. Dis.*, Nov. 1917.

Leukemia Cutis.—J. A. Elliott, of Ann Arbor, Mich., reports a case of leukemia cutis in an American Jewess 48 years of age. Intense itching over the entire body was the first symptom noticed by the patient, which was followed by a minute papular eruption. This papular eruption increased peripherally until quite large plaques were formed. The itching was periodical. Large blotches of peculiar discoloration, having the appearance of a diffuse hemangioma, appeared on the skin of the face, particularly on the left side. The epidermis of the trunk and extremities generally was of a sallow pale hue. Infiltrated nodules were scattered over the body, more particularly on the arms and trunk. These varied in size from that of a five cent piece to that of a dollar, were rounded in outline, flat, discrete and raised. In some places the lesions appeared to have involuted, a brown pigmentation being left. The active lesions were slightly darker in color than the surrounding skin, and were not inflammatory in character. The Wassermann reaction of the blood was negative.—*Jour. Mich. State Med. Soc.*, Jan. 1918.

Pruritus in Hodgkin's Disease.—Weber and Dove report the following case: The patient was a well-built but rather thin man 34 years of age. There was considerable brownish pigmentation of the skin, being more particularly marked about the many small papules on the thighs and trunk. This eruption was accompanied by much itching and consequent scratching, the itching being more intense at varying times and lessening in severity

during the interim. Many of the papules were reddish in color and in an actively irritable condition, while others evidenced no signs of active hyperemia. The cervical, axillary and inguinal lymphatics were somewhat enlarged but painless, and the Roentgen ray findings indicated enlargement of the lymphatic glands in the mediastinum. There was no other evidence of diseased viscera.

The case history presented the symptom of itching and the appearance of small reddish spots upon the skin a year before. Glandular nodules on the left side of the neck made their appearance two months later, and the patient suffered from cough, fever and sweating. Many papules appeared on the body and limbs. Some were acne-like in appearance and the majority were reddish in color; but several were somewhat larger and deeper and without any redness. There had been exacerbations of the pruritus with increased irritability of the papules at times. Frequently there had been exacerbations of the pruritus in which the itching had been referred to the papules without any evidence of fresh hyperaemic or inflammatory change.

Much of the hair on the scalp, face, axilla and pubic region had fallen out, and the hair on the patient's eyebrows had become short and scanty. In the early stages of the affection scabies was suspected to be present, and a lessening of the cutaneous irritation was believed to be the result of successful treatment against scabies. Arsenical treatment was attempted but had to be given up on account of soreness of the eyes. Statements by the patient indicated that the greatest improvement occurred under thyroid treatment, although this treatment was accompanied by loss in weight.—*Brit. Jour. Derm. and Syph.*, Jan.-Mar. 1918.

OTOLOGY

Conducted by J. V. F. Clay, M. D.

The Reliability of the Nystagmus Test.—Fisher and Babcock (*J. A. M. A.*, Vol. 72, p. 11). Psychologists have questioned the reliability of the nystagmus reaction setting forth the theory that individuals subjected to whirling or tumbling—acrobats, equilibrists, and aviators—lost their nystagmus as a result of their training; that such individuals when subjected to the turning or caloric test would present a sub-normal reaction and would therefore have sub-normal labyrinthine reaction and hence unfit for aviation.

Investigations in the Otologic Department of the Mineola Flying Field where 942 veteran flyers were examined. The average nystagmus after turning to the right was 24.8 and after turning to the left, 25.8 seconds. (Examinations of more than a hundred thousand individuals have shown that the normal average duration of the after turning nystagmus is 24 seconds.) These findings, together with those of Levy, who examined 541 aviators, and Brenner who examined 63 flyers, prove definitely that aviators do not lose their nystagmus as a result of rotation and whirling to which they are subjected. It is the contention of these investigators that "when a flyer, who on admission had a normal nystagmus, is found at some later time to have a marked impairment of this reaction, it is due to some other cause than flying per se."

These investigators have further made observations upon whirling

artists, acrobats and found no tendency to falling off of nystagmus. They exhibit normal reactions.

In order to prove that repeated turnings did not influence the after nystagmus, ten persons were selected and turned, six daily and four twice daily. The results indicate no loss or impairment of nystagmus. A few of the subjects showed an apparent shortening in the after nystagmus. This was due to fixation. Elimination of this by means of plus 20 lens and observing the nystagmus back of the glasses it was found to be normal.

These observations warrant the conclusions of the investigators: (1) The duration of the after nystagmus is not impaired by flying. (2) From evidence at hand it would seem that in acrobats, whirling dancers, airdome performers and in athletes in general there is no diminution of the nystagmus response. (3) Repeated turning experiments on normal persons occasionally produce an apparent and slight shortening of the nystagmus but that this is only apparent and not real is demonstrated by the convex glasses. (4) In medical practice an absence or impairment of eye responses following ear stimulation definitely indicate a pathological condition with the vestibular mechanism.

Report of a Case of Bilateral Acute Suppurative Otitis Media with Symptoms of Sinus Thrombosis.—(Stickney, *Laryngoscope*, Vol. XXIX, No. 2.) Stickney reports in detail the clinical course of this interesting case. Both mastoids were operated, found necrotic and filled with pus. The inner plate was removed on both sides to inspect the lateral sinus. These structures appeared normal but were aspirated with a hypodermic syringe. Blood culture made therefrom was sterile. Twenty-three days later the right lateral sinus was exposed and incised; bleeding was less free than normal and the right internal jugular vein was ligated. The left lateral sinus was also exposed and incised. Hemorrhage from this was very free but controlled by packing between the inner plate of the skull and the dural wall. The question now was, would the patient develop odema of the brain because both lateral sinuses were occluded? The subsequent course of the case shows that the collateral venous return by way of emissary, vertebral and superficial veins of the head and neck was adequate. The only symptoms exhibited were headache and slight twitching of the left arm which was present for one day. The patient made a good recovery.

MEDICINE

Conducted by Clarence Bartlett, M. D.

Digitalis Therapy: Satisfactory Effects in Cardiac Cases with Regular Pulse-rate.—Christian presents what might well be called a heart to heart talk with just plain doctors, although it may be that those higher up need such a talk even more badly. He remarks that the chief factor in the failure to get good results from digitalis lies in the improper use of that drug; most commonly the dosage given is insufficient. Insufficient dosage is in part the physician's fault; in part it is due to a poor digitalis preparation furnished by the druggist. The drug should be pushed to the point of tolerance, unless a definite effect is produced sooner. It seems that in our books and in our teaching, bad effects from overdosage of digitalis and descriptions of contra-indications to its use have been so emphasized that often the physician actually is afraid to give an adequate dose of the

remedy. In a quite extensive hospital experience with cardiac cases, the author cannot recall a single case admitted from the care of an outside physician in which too much digitalis had been given. Christian considers the fat free digitalis as an example of wasted energy; that it has no less deleterious effect on the stomach than any other preparation.

Another cause of too small dosage of digitalis lies in the common practice of prescribing the tincture by drops, and counting a drop as a minim, whereas it generally takes two or three or even more drops to make a minim. The author calls attention to the error of the general belief that myocarditis in some way is a contra-indication to digitalis or is a condition in which good therapeutic effects are not to be expected. In his own experience, in chronic myocarditis, a condition which is a very frequent cause of cardiac failure in people beyond forty, most excellent results follow an adequate digitalis therapeusis, and there are no contra-indications to its use, for even in those cases advanced beyond the bound of a therapeutic response no bad effects follow its administration. Finally, excellent results follow digitalis in hearts that are not fibrillating. It is well-known that the forceful teaching of a great man is ofttimes carried far beyond reasonable bounds. Mackenzie's teachings concerning fibrillation and digitalis have become so generally known that digitalis is not used so often as it should be, and so Christian in his paper shows that digitalis is useful in non-fibrillating hearts, and in concluding states that a confident use of digitalis in such cases, even though the pulse-rate may not be rapid, is justified.—*American Journal of the Medical Sciences*, May, 1919.

The Effect of Diet on the Healing of Wounds.—Clark, after making numerous studies of this subject in the Pathological Laboratory of the Johns Hopkins University, presents the following conclusions: "The length of the quiescent period of wound healing is affected by the diet. It varies from zero in protein-fed dogs to six days in the fat-fed animals. This variation in the quiescent period is more marked in smaller wounds. As a consequence, the date of final healing differs by about five days for the protein- and fat-fed dogs.

When the second period, or period of contraction, has set in the rate of contraction is not affected by the diet. It is governed by a variable factor depending on the age of the wound and by a constant factor proportional to the original size—$\frac{R_1}{R_2}$ equal $\frac{S_1}{S_2}$ when R_1 and R_2 equal rates of healing of large and small wounds and S_1 and S_2 equal original areas of these wounds.

The beginning of period three, the period of epidermization, is independent of the size of the wound and the diet. It is determined by the age of the wound. Contraction and epidermization continue together until the wound is entirely healed.

After the wound is healed the scar continues to contract until pigmentation sets in. During this latter process it enlarges and reaches a stationary state after pigmentation is complete.—*Johns Hopkins Hospital Bulletin*, May, 1919.

Carcinoma of the Stomach.—In a paper bearing the above title, Deaver asks this question: "What is there then on which we can depend for detecting early carcinoma of the stomach?" and answers it, "Quite frankly we may say, nothing positive; but the most reliable sources of information in the last analysis are first, the history and next, exploration. In a few

words, a patient in middle life (forty to sixty years of age) giving a history typical of gastric ulcer, or one who has always enjoyed good health until about a year or six months ago, and now complains of gastric symptoms, epigastric pain, with more or less rigidity, progressive loss of weight, more or less motor insufficiency, hydrochloric acid increased, moderately diminished or entirely wanting, lactic acid and Boas-Oppler bacillus present or absent, justifies a tentative diagnosis of cancer. The X-ray in such cases will probably show some changes in the outlines of the stomach and anomalies in the peristaltic waves, but laporotomy and the pathological laboratory will give definite information and upon the evidence thus obtained the surgeon will proceed to act."

What William J. Mayo wrote in 1904 holds good today in spite of the advances made since then in diagnostic methods. He said: "In an early exploratory incision we have the one diagnostic resource which is reliable, and which must be resorted to in a large majority of cases before a surgical diagnosis can be made. Without it the truth is but slowly established at the expense of progressive hopeless involvement. Exploration can be safely accomplished through a small incision and with a short time of disability. It is said that the patient will not submit to an abdominal incision upon suspicion. Herein we do the intelligence of the public an injustice; we have seldom been refused the opportunity, when the matter has been fairly and candidly laid before the patient and his friends. The plea for delay has more often come from the attending physician."—*New York Medical Journal*, May 3, 1919.

Epidemic Cerebrospinal Meningitis at Camp Cody.—Lamb presents the following conclusions respecting his experiences with Cerebrospinal Fever at Camp Cody, New Mexico.

1. It is a safe prediction that cases of epidemic meningitis will develop wherever large numbers of recruits are assembled and live together for any considerable length of time, in close quarters. The intimate personal associations, unavoidable in camp life, greatly favor the dissemination of the disease; hence, the potentiality of a serious, widespread epidemic.

2. The dissemination of cerebrospinal fever depends ultimately upon the presence of meningococcus carriers, although the existence of a nonspecific nasopharyngitis is undoubtedly a predisposing factor in the development of the individual case.

3. The period of greatest incidence of meningitis may be expected when the more common respiratory infections are at their height, due to the fact that in all of them nasopharyngitis is a primary and predisposing factor. The greatest number of cases of the latter develop when living conditions are at their worst.

4. In military camps, where large numbers of troops are mobilized from sections of the country in which meningitis is endemic, the possibility of the disease becoming epidemic is greatly increased by reason of the greater proportion of meningococcus carriers. A determined effort should be made, in such instances, to eliminate the carriers as quickly and thoroughly as possible. A general bacteriologic survey is the only logical means to such an end, and although its accomplishment on the large scale necessary in the average camp is fraught with many practical difficulties, it should be undertaken.—*The Journal of Laboratory and Clinical Medicine*, April, 1919.

Complement Fixation in Tuberculosis.—Barnes and Barnton have carried out studies of two hundred and seventy-nine patients at the State Sanatorium, at Wallum Lake, Rhode Island. They do not seem to have reached any practical conclusion. When a positive reaction was obtained it appeared that the disease was in the active stage; still there were a number of active cases in which they reached the following conclusion:

"As positive reactions to complement fixation occurred in only about 30 per cent. of progressive cases and in only 9 per cent. of negative sputum cases, the test was of slight diagnostic value in this series of cases."—*Boston Medical and Surgical Journal*, January 9, 1919.

The Complement Fixation Test in the Diagnosis of Tuberculosis.—Stoll and Neuman have made clinical and laboratory studies covering the above subject. They reach the following conclusions:

"1. It is at once apparent that the practical utility of the complement fixation test in the diagnosis of tuberculosis is limited by the fact that the highest percentage of results obtains in the cases in which its need is least felt, namely, the obvious cases with tubercle bacilli in the sputum.

"2. Nevertheless, from our experience, it would seem that with suspicious symptoms and suggestive, yet inclusive signs, a negative fixation test, using the method herein described, increases to a considerable degree the probability of the non-tuberculous nature of a given case.

"3. With the same symptoms and signs, a persistently positive reaction probably signifies an active tuberculosis.

"4. A positive reaction occurring with neither symptoms nor signs does not justify a diagnosis of active tuberculosis, though it is quite probable that there has been an active process recently. In such a case, roentgenoscopy should be employed and the patient observed for several months.

"5. With frank signs and symptoms, yet with no tubercle bacilli in the sputum, a negative test cannot outweigh the clinical evidence, though in all such cases a Wassermann test should be made.

"6. The diagnosis of tuberculosis is many times one of great difficulty. A careful history, a thorough examination, repeated sputum examinations and reontgenoscopic studies are all of recognized importance and cannot be replaced by any complement test yet devised."—*Journal of the American Medical Association*, April 12, 1919.

The Treatment of Paralysis Agitans with Parathyroid Gland.—Dr. William N. Berkley has been a strong advocate for the treatment of paralysis agitans with parathyroid gland. For a number of years his faith in it does not appear to have been abated. He contends that good results are to be obtained in all by the greatest care in securing a good preparation continued over a period of two or three months. He has tried several hundreds of patients and has found but one who had an idiosyncrasy for thyroid. The best preparation is an active extract of the fresh glands made by treating the ground or triturated gland with cold distilled water, filtering and then precipitating with a very minute amount of acetic acid. The precipitate is quickly dried and put away in the ice chest. This extract in doses of one-fiftieth grain, either in capsule with milk-sugar or as a hypodermic solution, is now for sale in a number of pharmaceutical houses in New York. It is absolutely without any secondary effects of a disagreeable nature. Further experience seems fully to justify the opinion that this extract is not a cure

for Parkinson's disease but that 60 to 70 per cent. of the sufferers of the disease who have given the remedy a fair trial have been greatly benefited, and that in such cases progress of the disease has been arrested or very materially retarded. In one case reported by Dr. George Martin, of Los Angeles, the patient was virtually raised from the dead in a few weeks by means of the hypodermic solution.—*The Therapeutic Gazette*, March 15, 1919.

The Effort Syndrome.—Cohn presents an interesting review of this subject. The symptoms now included under this title have been known in the past as the irritable heart of soldiers. There seems to be a disposition on the part of physicians to regard the condition as of psychic origin because recovery is distinctly retarded if the diagnosis directs attention to the existence of the heart. In fact, patients may so rivet their attention to the heart as to render it difficult and sometimes impossible to provide for their recovery.

But the complaints of patients have, since the condition was first recognized, fixed the attention on the heart. The symptoms include sense of fatigue, shortness of breath, pain in the chest, palpitation, and nervousness. Other complaints may be sleeplessness, bad dreams, headaches, a faintness, and sometimes fainting and unconsciousness. Notwithstanding the severity of the symptoms, the patients present a remarkably robust appearance. The faces of the patients suggest the appearance commonly associated with an anxiety neurosis—anxious eyes, drawn mouth, puckered forehead, trembling of the hands, and sometimes arms and legs. Pharyngeal and corneal reflexes are diminished; the patellar reflex is exaggerated. Areas of skin hyperesthesia and hypoesthesia are present; for the most part irregularly distributed. Examination of the heart often discovers a purr or small thrill, but this, although it has been supposed to precede the apex impulse, appears to be systolic in time. With this curious thrill there is an impurity of the first sound, a splintering into serrations of its muscular portions. The first sound is often loud and thumping. The two phenomena give the impression of the sound and murmur of mitral stenosis. The second sound is usually not as accentuated. If the subject is asked to exercise, the impurity of the first sound usually disappears and the second sound does not become accentuated. This test does much to remove the suspicion that the diagnosis in mitral stenosis. The pulse rate in 75% of the cases is elevated above 90, and in 11% it is below 80. In most cases it fluctuates, and in some it does so violently and frequently. The blood pressure, both systolic and diastolic, is usually not elevated. In his closing pages the author differentiates "Effort Syndrome" from gas poisoning.—*War Medicine*, December, 1918.

Syphilis and the War.—Hazen says increase of syphilis during war times among soldiers and civilians is an established fact. The method of controlling venereal disease, according to available statistics, has been less successfully developed in the United States than in other large countries. A special committee appointed for developing more successful treatment advises: Complete case records. Early diagnosis, clinical, microscopic, and serologic. Calomel treatment of chancre in preference to excision. Salvarsan and mercurial treatment, both strongly pushed. Monthly Wassermann tests to control the dosage. In the late cases without serious lesions, mercury and potassium iodide until the Wassermann test is negative. Special prophylactic and hygienic measures are recommended; also examinations of all men before discharge from the army, and compulsory treatment of all cases. Western Australia has enforced stringent laws with success.—Abstr. Surg.—*Surg., Gyn. & Obs.*, Vol. XXVI, p. 544.

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PUERPERAL ECLAMPSIA.

BY

WILLIAM W. WINANS, M.D., ROCHESTER, N. Y.

Senior Attending Obstetrician Hahnemann Hospital, Rochester, N. Y.

(Read before the New York State Homœopathic Medical Society, April 8, 1919.)

Of the triumvirate of dread complications of child-bearing, eclampsia stands second in point of mortality—25 per cent. First and last, respectively, come accidental hemorrhage with a mortality of 50 per cent., and placenta praevia with about 8 per cent.

Eclampsia, however, stands first in point of frequency, varying from one in fifty among hospital cases to one in three hundred elsewhere.

It may be classified according to the time of its appearance as ante-partum, 55 per cent; intra-partum, 30 per cent., and post-partum, 15 per cent.

Eclampsia in a puerperant is an acute morbid state which is characterized by a series of tonic and clonic convulsions, affecting first the voluntary and then the involuntary muscles, accompanied by complete loss of consciousness, and ending in coma or sleep. (Edgar.)

When we approach the etiology it must be admitted that our ship of theory, though not as yet dismantled, is still floundering in the Sargasso Sea with the other derelicts of conjectural medicine.

It is the writer's purpose to relate briefly various investigators' opinions and possibly clarify them or harmonize them with some of the late advances in body metabolism and our

knowledge of the inter-relationship of the endocrine glands as observed during pregnancy.

Edgar[1] says: "There is no definite, demonstrable, basic cause. We are well-assured that there is an autotoxic state which has a special tendency during pregnancy to attack the renal organs, and leads to the so-called kidney of pregnancy, which, in its essential form, is a temporary fatty degeneration of the parenchyma of the kidneys, that disappears after pregnancy. In the higher degrees of toxemia the kidneys undergo changes analogous to those of the liver in acute parenchymatous hepatitis and acute yellow atrophy. Whereas the exact toxic agent has not as yet been isolated, the bulk of evidence tends to favor the view that the spasmogenic poisons are both maternal and fetal in origin, probably of metabolic origin."

Hirst[2] says there is much to support the view of Kollmann, who "points out that the fibrin-forming elements of the blood are much increased in eclampsia. To these globulins, albuminous, large molecular bodies which furnish the excess of fibrin, is ascribed the toxicity of the maternal blood. Experimentally these substances have been demonstrated to be toxic, producing eclamptic symptoms. Whether these substances, if they are the toxins of eclampsia, are derived from the fetal metabolism or from the placenta is disputed. The innumerable experiments to demonstrate the placental origin of the toxins of eclampsia have as yet had no positive results."

Nicholson[3] claims that "the thyroid gland is the most important factor in furnishing an antibody for the toxins of pregnancy." "Adequate hypertrophy and hypersecretion of the gland, which is the rule in pregnancy, safeguards a pregnant woman against toxemia; inadequate activity predisposes her to it."

"Other investigators have sought the cause of eclampsia in abnormal secretions of the parathyroids, the suprarenals, the pituitary body, and the mammary glands." (Hirst.) Of this, more later.

The writer desires, now, to review with you some very careful and highly commendable work that has been accomplished in the elimination as causal factors of a number of the end products of metabolism supposed formerly to have had a marked influence in the production of the eclamptic

symptoms and as such to have a definite place in the etiology.

Recent studies and experiments for the purpose of corroborating previous experiments and conclusions of other authors, notably the studies of Ewing and Wolf,[4] have been made by Losee and Van Slyke[5] of the Lying-In Hospital and the Hospital of the Rockefeller Institute for Medical Research, New York. They, in duplicating Ewing's and Wolf's experiments, have concluded "that the toxemias of pregnancy can be attributed neither to failure in diaminization of the amino-acids, nor to the moderate degree of acidosis observed. The nature of the toxin or toxins remains unknown. The nature of the functional disturbances which cause the abnormal nitrogen metabolism observed also awaits a satisfactorily conclusive explanation. Nevertheless the constancy of the low urea ratios in the urine in eclampsia, and of high ammonia in pernicious vomiting, lends decided support to the opinions of Ewing and Wolf, that the nitrogen distribution in the urine, considered 'in connection with all the data in the case,' should assist in diagnosing the toxemias of pregnancy, and in differentiating them from conditions such as nephritis and transitory gastric disorders."

Slemons[6] has given added weight to the conclusions of the above investigators. He made the same experiments with the blood of a considerable number of cases of pre-eclamptic toxemia, eclampsia and allied intoxications, with the following conclusions:

1. Analysis of the blood in cases of eclampsia and allied intoxications reveals a normal quantity of amino acids and a slight retention of nitrogenous waste products, as urea and uric acid.

2. After convulsions there is an increase in the blood sugar.

3. The total fat is approximately the same in cases of toxemia and normal pregnancy. Usually the cholesterol is increased and the lecithin diminished in eclampsia.

4. The carbon dioxide combining power of the plasma is reduced during normal pregnancy, indicating a mild acidosis, and the variations met with in the presence of autointoxications are insignificant.

5. The results of blood analysis do not support the acidosis hypothesis nor the derangement of protein metabolism hypothesis of eclampsia, and indicate that the cause of the disease must be found elsewhere.

Before the metabolists will fathom the problem, I fear many years will elapse in view of Von Furth's[7] conclusions. Writing of autolysis he says: "It has been pointed out that the products of cleavage of the protein molecule are lost sight of at the very moment when they are resorbed through the wall of the bowel; and their first traces reappear when the end-products of metabolism begin to escape from the body. That which lies between is the unexplored and completely unknown field of the intermediate metabolism." What is true of the metabolic process with which the protein molecule is concerned, is, doubtless, in a greater or lesser degree, true of the other foods ingested.

What, then, of the chemistry of the tissues; what of the combined chemistry of the tissues of mother and embyro, and of that wonderful dialysis going on between the blood of the mother and that of the fetus; what of the effect of the fetal metabolism on the endocrine glands with their extremely complex inter-relationship with each other and their hormone action on the various tissues and functions of the body? We have here a vast field for conjecture and theory.

Talbot[8] has deduced from his studies that the fundamental cause of the toxemias of pregnancy, with or without convulsions, is not in the products of conception. He points out the illogicality of saying that the fulminating symptoms of eclampsia will rise to their height a number of days after their cause has been removed (post partum eclampsia). He admits as true that the pregnancy plays a part in the causation of the symptoms as evidenced that by terminating the pregnancy we frequently bring about an almost immediate abatement of the symptoms in the large majority of the cases. He summarizes by saying, that "the immediate cause of the symptoms of the disease is the retention of the normal waste products of the developing pregnancy. The primary cause, or the cause of the retention, is the inhibitory effect of the toxins of chronic sepsis on the excretory functions of the kidneys. He found that every studied toxemic case of his had a focus of infection in the teeth, but does not wish to imply that the focus of chronic sepsis must necessarily be found in the teeth. Any focus of chronic infection draining toxins into the blood stream is the essential condition."

His hypothesis is not untenable viewed from the standpoint of our knowledge of the numerous foci of infection

which often exist in the economy unsuspected and sometimes undiscoverable. Only by the painstaking application of modern methods to our maternity cases in seeking out the possible sources of any active or smouldering infection may we substantially prove his theory correct.

The apparently perfect health of persons harboring for some years an obvious infective focus, and the apparent invulnerability to trouble in pregnant women with like conditions present do not invalidate his claim. The extraordinary immunity to disease shown by so many under ordinary circumstances frequently fails quickly in the presence of the extra burden of pregnancy.

Bacterial infection is but one of the numerous causes of disease. It has yet to be disproven that the symptoms of eclampsia may arise from faulty inter-relationship of the ductless glands and other organs in the absence of any pyogenic infection. For this reason the writer just here desires to present for your inspection and criticism a picture of the complex inter-relations of the endocrine glands with special reference to the effect of such actions on the metabolism and functions of the pregnant woman. No definite conclusions, however, can be drawn from such picture owing to our lack of complete knowledge of the extraordinary activities of these glands. The aspect, though discouraging, is not hopeless. Indeed, investigators are on the eve of important discoveries in this field if recent literature is any indication.

The true explanation of the causes of eclampsia *may* be found in the hyper- or hypoactivities of the endocrine glands and the further influence of such activities upon the other intricate metabolic processes of the body. It may be easily understood that the distorted function or structure of any of the ductless glands whose co-operation in the human economy is absolutely essential to the maintenance of health in the non-pregnant may suffer even greater distortion by reason of the complex changes wrought in, and the unusual demands made upon, the economy by pregnancy. From the moment of conception, a delicate and harmonious readjustment of the innumerable relationships in the functions and structures of all the organs and tissues of the body takes place in the healthy female. Just as truly as pathological adjustment of all these functions and structures, an inharmonious interactivity in numerous metabolic processes begins to manifest itself in the

organism of the unfortunate woman whose equilibrium has been unstabilized by any cause whatsoever before the inception of pregnancy. Kindly consider with me a few of the fairly-well substantiated theories concerning the inter-activities of the various endocrine glands during pregnancy.

While we know that tetany is a disease entirely distinct from pregnancy, its symptoms are so closely analogous to those of eclampsia that a consideration of its cause and relationship to pregnancy may be illuminating. We know that the syndrome of tetany can be produced by extirpation of the parathyroids. We also know that among the influences provocative of attacks of tetany the occurrence of pregnancy and lactation are most prominent, although the administration of various poisons may also provoke an attack.[9] Pool[10] says: "The time of predilection for the onset of tetany appears to be in the second half of pregnancy, beginning with the sixth month, but contractions may appear in the early months or during parturition."

This agrees accurately with the time of occurrence of eclamptic symptoms, and is strongly suggestive, to say the least, of a close relationship as to cause. This similarity is also suggested when we remember that the administration of large doses of calcium meets the requirements, for a time at least, in the treatment of tetany, and the fact that the same drug is an accepted form of treatment for the acidosis found in moderate degree even in normal pregnancy. Pool says "the function of the parathyroids is apparently closely connected with calcium, and a hypo-activity results when there is a deficiency of calcium." In this connection, he quotes Kehrer, as follows: "The tissues, more particularly the central nervous system, may be deprived of their calcium contents through an increased calcium excretion in body fluids, such as blood, milk or urine; or through a neutralization of the calcium by acids. A reduction in the calcium contents of the body is physiological, within certain limits, in pregnant and puerperal women; but, it is assumed, once this limit has been exceeded, tetany is liable to appear when the parathyroids are imperfectly developed or functionally deficient. In pregnancy, the calcium of the maternal organism is drawn upon for the structure of the fetal tissues. During parturition, calcium is lost with the blood. The nursing mother loses calcium with the milk. If it is accepted that the parathyroids

are incapacitated by lack of calcium, the significance of all these physiological conditions is identical. The calcium impoverishment of the organism imposes a tax upon the parathyroid function, with the result that tetany may supervene in women having hypoplastic or otherwise deficient parathyroid glands." To offset these conclusions I might add that it has been recently discovered that it is practically impossible to materially change the amount of calcium in the blood, but it must be remembered in spite of this claim that the equilibrium incident to pregnancy is an exceedingly delicate one, and, in view of this fact, we may rightfully infer, I believe, that a diminution in the calcium content of the blood would not only be easy, but is to be expected in the puerperant. Further, if even a slight acidosis during pregnancy is admitted, we may confidently expect a partial neutralization of the calcium with a similar result—tetany.

Further, may we not feel justified in claiming the reasonableness of expecting the even more profound clinical manifestations of eclampsia to appear?

The intent of this paper would not be consummated if the writer failed to bring to your notice, briefly, several other recently-added contributions to our knowledge of the ductless glands as bearing on pregnancy and the allied toxemias.

Goetsch[11] says: "Primary alterations in the functions of the sex glands, as in pregnancy, and after castration, are followed by pituitary hypertrophy and hyperplasia. These changes are due to the accumulation in large numbers of a new cell type, the pregnancy cell, derived from the chromophobe or chief cell. These large pregnancy cells which are clear and neutrophilic dominate the picture, while the eosinophilic cells, markedly decreased in number, are crowded aside into the more central portions of the gland acini. The histological picture thus afforded is very striking. The hypertrophy occurring in the latter stage of pregnancy may become so marked as to exert pressure upon the adjoining optic chiasm sufficient to cause a transient bitemporal hemianopsia, cases of which have been reported from time to time. Associated with this hypertrophy occurring in pregnancy there may be signs and symptoms attributable to a temporary hyper-function of the pituitary, such as definite change in the thickness of the nose and face and enlargement of the hands and feet. Within a few months post-partum retrogressive changes oc-

cur, the pregnancy cells return to the type of chief cells and the gland once more assumes its normal appearance. The involutions of the gland may be incomplete, and after repeated pregnancies there may result a kind of strumous degeneration followed by symptoms dependent upon a deficiency in pituitary secretion." Can anyone doubt but that such a marked anatomical change in this anterior lobe of the pituitary may have a pathological influence on its function and that of the endocrine glands?

Crowe[12] has shown that marked changes in the liver have followed repeated injections of the fresh pituitary gland. Thaon[14] reports pathological changes in the kidney after prolonged use of large doses. We are all familiar with the effects of the secretion of the posterior lobe and the pars intermedia on smooth muscle fibres of the uterus and the blood-vessels, and of its characteristic as a blood-pressure-raising principle. Vasomotor changes in the skin are also present. It certainly needs no vivid imagination to understand how it might be easily possible to attribute the constantly high pressure of the toxemias to the before-mentioned alterations in structure; and when we add to these facts another well-known fact, that a hypothyroidism causes a hypersecretion of the pituitary, we have all the links in the chain of evidence to prove that high blood pressure might be a natural result, and one to be expected under the conditions incident to pregnancy and its effects on the glandular system, whose equilibrium may already be in a state of instability. With the stage all set and all conditions favorable, is it any wonder that eclampsia appears upon the slightest invitation, viz., the as-yet-unidentified toxin? Do we really need a toxin? Why go further back than an inharmonious interactivity of the endocrine glands in a woman with an impoverished or unstable nervous system, shall we say a calcium-impoverished nervous system?

There is a strong suspicion in my mind that when we are in possession of more accurate knowledge of the interactivities of the endocrine glands, the solution of the cause of puerperal eclampsia will be forthcoming. At least, though we may remain in ignorance of the basic cause for an indefinite period, we will soon have a fairly accurate knowledge of the intermediary activities instrumental in the production of the eclamptic syndrome.

In the meantime, let us busy ourselves with the preven-

tion of pathological conditions which assist in the production of the toxemias, the liver and kidney inefficiencies and the eclampsias. This entails far greater care than is customary in the carrying out of the hygiene of pregnancy, more frequent urinalyses and blood-pressure readings. The latter is now considered by far the most important test in the early recognition of an on-coming eclampsia. When the toxemia or pre-eclamptic state is observed, tests for the blood urea and urine urea and the alveolar air test should be made by methods well known to the metabolist. This will add to our knowledge of the patient's condition and indicate our line of treatment.

I wish now, at the risk of triteness, to elaborate a little upon the importance of blood-pressure readings in all cases of pregnancy. Variation from the normal is almost the first symptom of beginning toxemias, and, today, one might as well expect to practice obstetrics without the sphygmomanometer as to practice medicine without a thermometer.

Irving[13] of the Boston Lying-In Hospital agrees with most authors in his recent studies of the systolic pressure in 5,000 consecutive cases. The lowest systolic pressure he observed was 80, the highest, 225. In my own series the pressure ran from 90 to 265, the latter reading being one following a convulsion near term.

The following conclusions may be accepted as authoritative:

An elevated blood-pressure is more commonly an index of toxemia than albuminuria, and apt to be an earlier sign, as well as a concomitant one. (Irving.)

The degree of elevation of the blood-pressure points more surely to toxemia than does the degree of albuminuria. Both, however, are of the utmost importance.

Excepting in rare instances, a toxemia will not exist in the absence of an albuminuria, or an elevated systolic pressure, or both. (But one of Irving's cases had convulsions with a low pressure, a reading of 90 mm. systolic.)

Aside from its diagnostic value the systolic pressure is of great prognostic importance, a high or rapidly rising pressure should place us on our guard. A reading of 150 mm. should be considered a danger sign though not necessarily a danger point. A higher pressure, up to 200 or over, should be given immediate attention, and an early decision as to the quickest and best method of delivery is necessary.

Unless in a hospital where the modern tests can be con-

stantly applied and a close watch kept on the progress of the disease, it is an extremely hazardous thing to temporize with cases of this sort.

The writer has been much interested in studying the toxemic, or potential eclamptic cases that have come under his care in recent years. In my last series of 187 cases where readings were routinely taken antepartum, seventeen were toxemic or 12 per cent. Total number of readings was 1,026, with an average of eight readings to each patient. The lowest systolic reading of the seventeen toxemic cases after becoming so was 156 and the highest 226. The toxemic cases comprised only those whose pressures rose to above 150. Of the entire 209 readings taken of this 17 cases the average high figure was 178. Strange to say none of these seventeen had a convulsion during the course of the readings; one, whose highest reading before labor was 210 had a convulsion after labor and the pressure was then 225. Another whose highest reading before labor had been 165 mm. had two convulsions two hours after labor, the systolic reading then being 140. Two of these cases whose resistance to the treatment had been most stubborn were delivered of dead children, one in the seventh, and the other in the eighth month, both children having died in utero as diagnosed by the disappearance of the fetal heart beat twenty-eight and forty-eight hours respectively before delivery, which was natural in each case. The babies undoubtedly died of toxemia, a not unusual termination in such cases.

A short history of these two cases may be of interest:

Mrs. F. S., age 27, primipara; croup, whooping cough, measles in childhood; chorea for eleven months following a pneumonia; asthma from 12 to 20 years; tonsilitis at 18; no other chest or abdominal diseases; family unimportant. Labor due December 19, 1916; pelvic measurements normal; urine and blood-pressure normal up to October 6, when she came to the office with a blood-pressure of 140/90 and a two plus albumin. Patient was put to bed on a milk diet. Pressure next day 156, one week later 136, twelve days later 180 while still in bed on a soft diet. A more rigid diet reduced the blood-pressure slowly during ten days to 132 though the albumin was still plus 2. At no time had there been casts in the urine as tested by Dr. E. R. Sprague and myself. The fetal heart, which had been 136 a week previously, was found

on November 6th to vary from 84 to 160 in the space of a minute or so. Two days later no fetal heart could be found and the husband was so notified, the systolic pressure dropping the same day to 120. Three days after the death of the fetus, patient was delivered normally. The blood-pressure remained normal but the albuminuria did not clear up for three months. The patient became pregnant again two months after her labor and while the albumin was still present. The turn of events was awaited before deciding on any special treatment. The albuminuria cleared up and there was no trace of it during the last six months before the normal delivery of a live baby. At no time did her systolic pressure rise above 116. She has been well ever since.

Mrs. M., age 38; primipara; weight 124; infancy normal; measles; pertussis; varicella; typhoid at 11 years; scarlet fever at 20; tonsilitis twice; Wassermann negative. Father died of cancer of mouth from ill-fitting teeth. Family history otherwise negative. Patient had an uneventful miscarriage November, 1916. Last menstruation January 28, 1917. April 22, had a copious vaginal flow for about two hours, which continued as a slight flow for about a week; patient did not think she was pregnant so did not consult anyone. Seventeen days after first flow had a slight show for a few days. June 5th she consulted the writer and engaged him for her confinement.

At this time faint systolic murmurs were found over aortic, pulmonary and tri-cuspid areas, later over the mitral. Measurements of pelvis showed a slightly contracted one; urine normal; blood pressure 140/70. One month later, slightest possible trace of albumin; B. P. 140/80. Three weeks later, trace of albumin; B. P. 180/100. Patient was put to bed on a milk diet, with directions to take warm sponge baths daily, and to lie between cotton-flannel sheets. One week later, a faint trace of albumin; B. P. 194/100 in the right arm and 140/80 in the left, with no other symptoms of an aortic aneurism which we are told to suspect with this discrepancy between the right and left arm readings. All this time there had been no other symptoms of toxemia save a peculiar erythematous blotching of the skin of the face, neck and chest, which would appear at the least excitement and disappear as quickly. The patient was sent to Hahnemann Hospital and remained for one week under careful treatment.

On August 21st there was a 3 plus albumin, the blood-pressure being 220/104. The readings fluctuated between 220 and 196 during the next six days when through a misunderstanding the patient went home. Before her departure blood and urine were obtained for urea estimation. Dr. John R. Williams, the metabolist at Hahnemann, kindly offered to make these tests, as well as the alveolar air test, thinking a corroboration of Losee's and Van Slyke's findings would be interesting and give us a better understanding of the case. Four days after going home the patient was seen in consultation with Dr. E. W. Jackson, who has done exceptional work in blood pressure at the Taylor Instrument Company. In the absence of the customary symptoms of toxemia which should be much in evidence at this time, I had been inclined to attribute the high pressure to a possible psychic cause. The readings were now 226/130. She was immediately returned to the hospital and placed under the same treatment. Hyaline and granular casts now began to appear in the urine. A phthalein test showed approximately 50 per cent. for two hours. The systolic pressure now began playing pranks, varying at one time from 206 to 160 within ten minutes and then rising to 190, where it settled. This continued for several days, the fetal heart remaining strong and running from 136 to 164 on different days, on September 4 being 154. Sunday the systolic pressure was 190, the patient feeling somewhat weak from three pints of milk as a daily diet. That afternoon the fetal heart beat could not be found and that evening after about two hours labor, a dead fetus was delivered. The systolic blood-pressure remained at 180 for ten days, the diastolic at 100, and a clean sample of urine showed a 3 plus albumin. Two months afterward the systolic was 144, the diastolic 96 and the kidneys were normal.

Dr. Williams has furnished the following tests. They prove up Losee's and Van Slyke's findings which have been discussed above.

Mrs. M.

Urine examination, Aug. 27-28, 24 hour specimen, 2700 c.c. Spgr. 1009, no sugar; no diacetic acid; moderate amount of albumin; free ammonia 2.3 grams.

Comment: The ammonia in this sample is very high, comparable to that found in the acidosis of a severe diabetes. Few normal individuals excrete more than one gram of free ammonia in 24 hours.

Aug. 28.—Chemical examination of the blood: Blood urea, 31.46 mg. per 100 c.c.; urine urea, 3.67 grams per 1000 c.c.; Ambard co-efficient, .132.

Comment: Urea nitrogen varies from 15 to 25 grams. The urea in this case is slightly above normal. The urea output in the urine is slightly below normal. This indicates a slight disturbance in the excretion of urea as is shown by the Ambard co-efficient of excretion which in this case is .132. The normal co-efficient of urea excretion ranges from .06 to .09.

Sept. 4th.—Blood urea 22.79 mg. per 100 c.c. Phthalein output, two hours approximately 50 per cent.

Comment: The blood urea in this case at this time was well within the normal limits. The phthalein functional kidney test is within the minimum normal limit.

Sept. 11.—The alkali reserve of the blood was determined by Van Slyke's blood bicarbonate method and a reading of 50.9 was obtained. This is equivalent to a carbon dioxide tension in the alveolar air of 35 mm. and indicates a very mild acidosis.

The foregoing data suggests the following: The disturbance in the urea metabolism is far too slight to account for the profound toxic symptoms exhibited by the patient. The high urinary ammonia output usually indicates a severe acidosis. In this case, there is probably some other explanation than acidosis, as suggested by the almost normal alkali reserve of the blood. The phthalein output indicates a very slight degree of disturbance in urinary function.

These brief examinations support the view of Van Slyke and others that the cause of eclampsia is not due to urea retention or a disturbance in nitrogen metabolism as now understood.

801 Professional Bldg.

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SOME THOUGHTS ON INFANT FEEDING.

BY

CHAS. H. SEYBERT, M.D., PHILADELPHIA.

(Read before the Philadelphia Clinical Research Society.)

WHEN we stop to realize that gastro-intestinal and nutritional diseases are responsible for over 50 per cent. of all the deaths occurring during the first year and that practically all of these have been artificially fed, we begin to appreciate the importance of a proper knowledge of the fundamentals or rudiments of infant feeding.

Mother's milk, that birth-right of all children, is the infant's natural food; the one upon which it is most apt to thrive, and it behooves us to use all available means to preserve its integrity through diet, rest, exercise, etc., on the part of the mother before resorting to artificial methods.

It is surprising the number of infants one meets who have been deprived of the breast without the least attempt having been made to correct what may have been the disturbing factor, chief among which is "too frequent feeding." Breast fed infants by virtue of this fact that theirs is the natural food receive more nourishment from it than do those artificially fed, consequently their requirements are not so great and for this reason do not need feeding at so frequent intervals.

The average infant should be put to the breast every three or four hours during the day, which means from six or seven in the morning until nine or ten at night, and once during the night from the first day until it is three or four months of age, when the night feeding can be discarded.

One is frequently asked the length of time a child should nurse. This is strictly an individual question dependent upon the infant, whether weak or strong, without appetite or greedy, and upon the readiness with which the milk is obtained from the breast. Arbitrarily it is not wise to allow a baby to nurse longer than fifteen or twenty minutes.

A baby thriving on the breast should gain from six to eight ounces in weight weekly up to the fifth or sixth month. After this the increase is a trifle less. It should be contented, sleep peacefully between feedings, should not vomit, and its bowels should move from one to four times daily with stools

of mushy consistency, yellow in color, and free of particles and mucus. If on the other hand the child does not thrive, if its gain in weight is unsteady or it does not gain at all, has indigestion or colic, is fretful and sleeps poorly, we have a condition whose etiologic factor or factors should be thoroughly investigated before breast feeding is withdrawn.

Too frequent feeding is largely responsible for the digestive disturbances in the breast fed and is easily corrected by lengthening the interval.

If, after the correction of bad training or habits, the condition of the infant remains unimproved, we have recourse to one of three methods of procedure: first, to endeavor to improve the quality of milk; second, mixed feeding; third, and as a last resort, artificial feeding.

To improve the quality, the milk must first be analyzed to determine which of the elements is at fault. *A deficiency of proteids* means underdevelopment, stationary or decreasing weight, late walking, delayed dentition, anemia, asthenia, constipation, and irritability. Which to correct give the mother tonics, lessen the exercise, increase the hours of rest, lessen water and other fluids, see that the diet contains plenty of milk, beef, beans, peas. The use of Southworth's soup (made by boiling 1 or 2 tablespoonfuls of corn meal in 1 quart of water and adding some palatable flavoring) sometimes does well. *Protein excess* is usually accompanied by vomiting of curds one-half hour or so after feeding. Colic is present, the stools are generally loose and of greenish color, containing tough curds and mucus. To overcome this condition, increase the exercise and decrease the proteids (milk, meat, peas, beans) in the food. Increase the water, and give an occasional dose of salts. *If there be a deficiency of fat* the infant fails to gain in weight, is irritable and constipated, and if the condition continues, rickets is a common sequence. To remedy it, lessen the exercise, increase the meats and fats, give plenty of good rich milk, tonics to improve the appetite and the addition of one of the malt preparations to the diet. Southworth's soup is particularly good, as it increases the fat in the milk. *Excess of fat* is characterized by spitting up food having an odor simulating that of rancid butter, an hour or two after nursing, irritability, colic, fretfulness, stools of greenish yellow color containing white particles resembling a chopped egg (the egg and spinach appearance), and mucus.

For this condition, increase the liquids especially water. Increase the exercise, lessen the amount of food particularly milk, meat and fats. Remove the cream from the milk, and give an occasional dose of salts. *Deficiency of sugar* causes a sub-normal temperature, loss of weight, irritability, and constipation. The treatment for this condition is to increase the carbohydrates, particularly sugar. Lessen the amount of water and exercise, and use one of the malt preparations. Indigestion depending upon an excess of sugar is marked by sour, watery vomitus, colic, fermentation, greenish, loose, diarrheic stools which are apt to excoriate the buttocks. *In excess of sugar* remove the carbohydrates from the diet, especially the sweets, and stop candy in particular. Increase the exercise and fluids, giving an occasional purge of salts. *When the total quantity is deficient* enjoin plenty of rest, the avoidance of worry or other psychic disturbances, allow a moderate amount of exercise, give plenty of good, wholesome, easily digested food, drink freely of water, milk, or weakened tea, and see that the breasts are thoroughly emptied at each nursing. Use galactogogues such as Southworth's cornmeal soup or maltropon, one tablespoonful in a glassful of milk or water taken three times daily.

Mixed feeding is used either to give the breasts a rest and to allow their refilling, or to make up for the loss in quantity. It is of two kinds, supplemental and complemental.

By supplemental feeding we mean entire breast feedings at certain hours, alternating with entire bottle feedings at other times. If need be, both breasts may be nursed from at one feeding.

Complemental feeding, on the other hand, is where the breast feeding is followed immediately by a bottle feeding. In order to determine the amount of food the child is taking, it should be weighed before and after nursing. The difference between what it gets and what it should have will be its complemental feeding. This difference is made up of a formula suitable to the child's age and fed from a bottle. After having taken advantage of all available means to preserve the breast milk for at least a period of four weeks with no improvement in the condition of the infant, then and only then are we justified in making use of our last resort, namely, artificial or bottle feeding.

	Woman's Milk.	Cow's Milk.
Proteids	1.50	3.50
Fats	3.50	4.
Carbohydrates	6.50-7	4.50
Salts	0.3	0.7

Breast milk when compared with cow's milk is seen to contain less proteids and salts and more sugar, and it would seem that all one had to do in order to render cow's milk as nearly like human milk would be to add water to reduce the proteids, and salts and sugar to increase the carbohydrates. This works out beautifully theoretically but not always so well practically for, while cow's milk and human milk have to all practical purposes the same chemical composition, physically they are entirely different, the chief difference being that cow's milk curdles in a tough leathery mass while the human milk curd is a soft flocculent one.

The three requirements essential in the artificial feeding of infants are, first: the food should contain the proper elements for the nutrition and growth of the child; second, it must be digestible; third, it must be of the proper quantity from a caloric standpoint.

Taking these up seriatim, let us consider first the elements, the proteids, fats, carbohydrates, salts and water. The proteids are essential in that they replace the nitrogenous waste of the body cells through which the digestion and assimilation of the other elements depend.

Since cow's milk contains 3½ per cent. proteids, and breast milk 1½ per cent., this element of the food can readily be made to approach human milk by the simple dilution of water.

The fats possess the property of saving nitrogenous waste as well as adding to the body weight and to the growth of bone and nerve cells, and, while theoretically the infant should have 4 per cent. fat, from a practical standpoint we find this to be a rather severe tax upon the child's digestive organs. Hence, cow's milk, when properly diluted, will be found to contain sufficiently high fats to maintain nutrition, particularly so as the carbohydrates make up for or replace the loss.

The sugars mostly employed are milk, cane, and malt. Their chief use is to supply the heat and energy of the body.

When cow's milk is diluted, there is at the same time a

reduction of sugar which is far too low for the child's needs, so, in order to raise the carbohydrates to the proper amount, an addition of 5 per cent. sugar is usually employed. This is equivalent to about one ounce in 20 ounces of the mixture.

The principal salts found in milk are calcium magnesium, sodium, potassium, and iron. They are necessary in the growth of body structures as well as for cell growth and, while existing in large amounts in cow's milk, simple dilution is all that is required.

The water is necessary for the rapid elimination of waste material and at the same time gives the milk its liquid form adaptable to sucking.

On the digestibility of the different elements, the principal controversy of the present day seems to be in regard to the fats and proteids. Heretofore the proteids were thought to have been the all disturbing element, and as a result of this top milk, cream, and whey mixtures became very popular. The proteids were reduced to a minimum and the fats increased far beyond the infant's tolerance for them. That this theory has been disproven is shown by ample clinical evidence in which it has been found that by giving large amounts of casein it is often possible to control or cure cases of diarrhea, the explanation being that casein causes an increased intestinal secretion, which secretion, being of alkaline reaction and rich in albumen, tends to neutralize the fermentative processes. In addition, the efficiency of fat-free or skimmed milk in intestinal disturbances cannot be disputed. The use of alkalies such as lime water to render the proteids more digestible is, excepting in special indications, losing its popularity. They were mainly employed to neutralize the acid gastric juice in order that the milk might pass into the intestines without curdling. One argument against their use is that through the alkalinity produced there is apt to be a delay in the opening of the pylorus resulting in stasis with a subsequent dilatation of the stomach.

The boiling of milk for its effect upon the proteids has some adherents. Its virtue lies in the fact that it retards coagulation in the stomach. Some men feed boiled milk exclusively, adding orange juice to the infant's diet to overcome any tendency to scurvy or rickets.

The present status of cereal gruels to render the curds more flocculent is the same as it has been during the past few

years. There are other advantages afforded by cereal feeding than this, viz.: for their starch content, it is not advisable to use them during the earlier months excepting temporarily because, at this time, due to the infant's inability to digest starch, their employment may cause gastric or intestinal indigestion. After the third or fourth month, however, they may be used with impunity. As a result of top-milk, cream, and whey mixtures, the fat of cow's milk has probably been the cause of more indigestion than any other element of the food. In their endeavor to overcome the deleterious effects of the proteids, these "high fat" feeders seem to have entirely overlooked the baneful effects of high fats.

An excess of fat is more difficult to dispose of than an excess of either the proteids or carbo-hydrates. This excess is not absorbed but remains in the intestines and is there saponified through the action of the alkaline intestinal fluids as a result of which there is a drain imposed upon the alkaline bases of the body and, the supply soon failing to meet the demand, we have a relative acidosis produced. Let it be understood that every child fed upon a high fat formula does not develop this condition but the number who do is sufficient to warrant our feeding on a more rational basis.

Until recently very little thought was given the carbohydrates. When Finkelstein called our attention to the disturbances caused by sugar, which he called "alimentary fever," he showed that sugar, no matter from what source derived, might cause elevation of temperature with dyspeptic stools and that this condition cleared up when the sugar was removed from the food.

The kind of sugar one may preferably use is a mooted question. Some men claim that an ordinary infant having a normal digestive capacity and never having much digestive disturbances, does well upon milk or cane sugar. Finkelstein and Meyer, on the other hand, believe that milk sugar is the primary cause of fermentative dyspepsia in infancy. Some claim that malt sugar is more laxative than either cane or milk while others state that the reverse is true. It seems, however, that malt sugar is more easily digested and more assimilable than the other varieties.

The salts likewise have attracted more attention in recent years than formerly. Many obscure intestinal fevers may trace their origin to the inorganic salts.

The sodium and potassium salts in excess cause an irritability of the nervous system and favor a retention of water. The calcium and magnesium salts, on the other hand, have a quieting effect although in a diminished quantity they are apt to cause a hypersensitiveness of the nerves with a tendency to the spasmophilic diathesis.

The energy-quotient or the number of calories of food required daily varies with the size of the infant, the state of its nutrition, the amount of energy expended, and heat lost. Ordinarily, infants under six months require 45 calories for each pound weight, and for those over this age about 40 calories for each pound weight.

As to the methods of feeding, there is no set rule. Every child is a law unto itself. The formula must conform to the child and not the child to the formula.

Since the fallacy regarding the proteids has been shown, top-milk mixtures have fallen somewhat into disuse and so, looking for a more balanced food in which the proteids have been increased and the percentage of fat reduced, it has been found that whole cow's milk seems to meet the demand in 75 per cent. of the cases.

The tendency today in infant feeding seems to lean toward simplicity, so much so that such men as Grulee, Dennett and Still advocate simple dilutions of cow's milk, allowing a certain number of ounces of milk for each pound body weight, and bring up the carbohydrates with a fixed amount of sugar without regards to per cent., checking the whole to the caloric needs of the child.

In the majority of cases this meets all the requirements but there are instances where a better check upon the food must be had because of the infant's intolerance for proteids, fats or carbohydrates. Under these conditions, we must determine the percentage in order to change the offending element to meet the child's tolerance, and at the same time check the whole food to meet the caloric requirements.

For every day needs the following table may be of help.

During the first and second months, use a one-third mixture, also called a 2 x dilution, consisting of:

Whole cow's milk...1/3	Proteids, 1.1%
Plain water 2/3	Fats, 1.3%
Sugar 5%	Sugar, 6.5-7%

During the third, fourth, and fifth months, a one-half mixture or 1 x dilution, consisting of:

Whole cow's milk...1/2	Proteids, 1.75%
Weak barley water..1/2	Fats, 2%
Sugar 5%	Sugar, 6.5-7%

From six to nine months, a two-thirds mixture, consisting of:

Whole cow's milk...2/3	Proteids, 2.2%
Barley gruel 1/3	Fats, 2.6%
Sugar 4%	Sugar, 6.5-7%

From nine to eleven months, a three-fourths mixture, consisting of:

Whole cow's milk...3/4	Proteids, 2.6%
Barley gruel 1/4	Fats, 3%
Sugar 4%	Sugar, 6.5-7%

At twelve months, the child should be able to take whole milk.

In early infancy where there is an intolerance for proteids, a 10 per cent. top-milk mixture may be used. This contains a low proteid with a relatively high percentage of fats and sugar. Those infants having a sugar intolerance also do well upon the top-milk formulae.

A certain class of cases who do not seem to do well upon any kind of sugar may thrive upon malt soup extract. Just why this is so has never been satisfactorily explained. Malt soup extract is also of great value in obstinate cases of indigestion, weight disturbance, and acidosis from high fat feeding, fermentative diarrhea, and in malnutrition.

Skimmed milk or buttermilk are indicated in those cases showing a fat intolerance.

Finkelstein's Eiweiss milch, or casein milk, is almost a specific in fermentative and putrefactive diarrheas and as a temporary expedient it has also been found to be beneficial in dyspepsia and in malnutrition or atrophy. Casein milk has for its essential principle the elimination of the whey, thereby reducing the sugar as well as the sodium and potassium salts.

As to the intervals between feeding, there seems to be a general tendency toward longer periods. Most men favor a two hour schedule during the first month, gradually increased to two-and-a-half hours until the third month and thereafter

every three hours. Up until three months, one night feeding is all that is necessary; after this time it may be omitted.

Incidentally in passing it might be well to recall that in the gastric digestion of milk, the carbohydrates are the first to leave the stomach, then the proteids, and lastly the fats. This is made practical use of when, in feeding upon skimmed milk mixtures, we feed more frequently than when using top-milk or high fat formulae.

The quantity that an infant may take at a feeding does not altogether depend upon the actual capacity of the stomach, some of the food passing into the intestines before the feeding is finished. This being the case it is a good working rule to allow a large infant, or one of average size, one or two ounces more at each feeding than the number of months of its age up to 8 or 9 ounces. In an undersized infant it is better, however, to allow but one ounce for each month of its age.

MULTIPLE SCLEROSIS.

BY

WILLIAM H. ATEN, M.D., BROOKLYN, N. Y.

Neurologist Peck Memorial Hospital, Cumberland Street Hospital, Prospect Heights Hospital and Brooklyn Maternity.

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No attempt will be made in this paper to evolve any new or startling ideas regarding the subject of multiple sclerosis, the intention of the writer being merely to review certain clinical features which have been accorded more or less general acceptance. He has been led to do this for the reason that he feels that the disease is of more frequent occurrence than is generally conceded and that as a sequel to the recent epidemic of influenza there will be a material increase in the number of cases.

Multiple or disseminated sclerosis, also called insular sclerosis by some writers, is a disease which affects both the brain and the spinal cord in varying degrees. The sclerotic patches are of irregular shape, from a millimeter to several centimeters in diameter, and present characteristic pathological changes. The sclerosis differs from that occurring in

other forms of sclerosis as it is not limited to definite tracts: it does not lead to secondary degeneration in the various tracts in which it may happen to lie, because it spares the axons though involving the medullary sheaths of the neurones. In the brain such patches are rarely found in the cortex but more commonly in the white matter beneath—in the corpus callosum, centrum ovale, the gray matter of the basal ganglia, pons, medulla and more rarely in the cerebellum. Any or all the tracts of the spinal cord may be involved. Of the etiology very little is known, probably due to an infectious process the nature of which is involved in obscurity. It is never due to syphilis. The disease usually appears during the earlier periods of life, from the tenth to the thirtieth years, but may occur at any age.

The diagnosis of multiple sclerosis is made by a consideration of all the symptoms, the way in which they have developed, or manifested themselves after development, from a careful analysis of the objective symptoms, or physical signs, and finally by a process of exclusion—by eliminating the possibility of other diseases of the central nervous system which may give rise to symptoms similar to those presented by the patient. When we consider that the islets of sclerotic tissue constituting the disease may be situated in any part of the central nervous system, and that they are always multiple, it is not astonishing that multiple sclerosis may parallel in its symptom complex any organic or functional disease of the nervous system. For instance, such islets occurring in the posterior column of the cord may give rise to the subjective and objective symptoms of locomotor ataxia; located in the lateral tracts and in the anterior gray matter they may present the symptom complex of amyotrophic lateral sclerosis; located in medulla (vertical portion) they may cause the symptoms and signs of bulbar palsy; situated in the cerebellum, they may cause the symptoms which suggest cerebellar tumor or cerebellar atrophy, and so on throughout the entire list. The disease must be diagnosticated by weighing the symptoms that are present, and carefully considering the symptoms that are absent. To differentiate it from tabes we must take into consideration the information furnished by a study of the blood serum and cerebro-spinal fluid, the condition of the pupils and sensory disturbances. The cerebro-spinal fluid is normal in multiple sclerosis: practically never is it normal in tabes. The

Argyle-Robertson pupil never occurs in multiple sclerosis; it occurs in eight out of ten cases in tabes. Thus we may reach a correct diagnosis in any given case by eliciting and weighing the evidence as presented by the symptoms.

Although the fact that multiple sclerosis is a disease the origin of which is entirely unknown and that its course is practically uninfluenced by treatment, it must be borne in mind that by making a correct diagnosis we eliminate the existence of a disease of similar characteristics which is founded on morbid processes susceptible of cure, and therefore the incentive for accurate diagnosis is just as great.

The islets of sclerosis, as has been said before, may be situated in any part of the central nervous system. It at one time was thought that they had a special affinity for certain definite locations such as the corpus callosum and the posterior columns of the cord but there is little real foundation for such a belief; as a matter of fact we know nothing of the factors that cause the deposition of sclerotic foci, nor whether this development stands in any relationship to the blood supply of the parts or not. If multiple sclerosis has any distinctive characteristics it is multiplicity of symptoms which of course is the natural result of multiplicity of foci of the disease. Many years ago Charcot familiarized the profession with the fact that oftentimes the disease displayed itself by spasticity of the extremities, scanning speech, intention tremor and mystagmus. Nothing has hindered the recognition of the disease so much as the widespread belief that these cardinal symptoms must be present before the diagnosis could be made. It has frequently been said that if we did not make the diagnosis without eliciting such symptoms we would miss at least 75 per cent. of the cases. A safe rule to follow is to suspect multiple sclerosis in every instance in which spasticity develops without definite causation. If in such cases it can be elicited that the patient has had even remotely such symptoms as transient diplopia, indefinite and transitory paraesthesia and fleeting disorders of equilibrium the probability that we are dealing with the disease in question is very great. This probability will be materially increased if in the patient there is found on examination one or more of the classical symptoms emphasized by Charcot, and particularly if there is a loss of abdominal reflexes. The next most important characteristic is the course of the disease, which rarely if ever

progresses uniformly. Its course is characterized by remissions, not necessarily complete but by diminution of their intensity. In some instances they cease entirely and the individual considers himself well but invariably they recur with greater intensity than before.

The prognosis in multiple sclerosis is unfavorable for recovery but the disease does not make rapid progress and as remission occurs spontaneously, some relief from time to time may be promised. In a few cases symptoms have subsided and have not returned for several years; the cases reported cured belong to this class and the earlier in life the disease develops the better the chances of its arrest. The appearance of bulbar symptoms should give rise always to serious apprehension as some cases of rapidly fatal termination from paralysis of deglutition or from respiratory failure have been recorded.

Treatment.—As the disease is considered by all to be incurable, nor to be influenced for the better in any particular by remedies, the treatment must necessarily be directed toward improving the general condition. It is essential that the patients should avoid physical exertion and a rest cure often helps materially to arrest the progress of the disease, temporarily at least. Nutrition must be kept at the best possible point, fresh air, massage, the spinal douche and high frequency electrical applications. The indicated remedy furnishes the most promising basis for treatment from the fact that nothing is known of its cause. Among the remedies most prominently indicated are: aurum mur., causticum, zincum met., argent nit., and many others too numerous to mention in a paper of this character.

Artificial Pneumothorax Treatment of Acute Lung Abscess.—From the Cook County Hospital, Chicago, Golberg and Biesenthal contribute the histories of three cases of acute pulmonary abscess that were cured by the employment of induced pneumothorax. They believe that this method offers distinctly better advantage of success than the ordinary medical and surgical procedures heretofore used. The mortality after medical treatment has been 54 per cent.; after the usual surgical measures, approximately 25 per cent. Collecting the 16 cases thus far reported as having been treated by artificial pneumothorax, including the three in their own experience, the authors find that 75 per cent. have made a complete recovery, 12 per cent. have been improved, and 12 per cent. have died.—*American Review of Tuberculosis*, May, 1919.

THE STUDY OF THE REPERTORY FROM THE VIEWPOINT OF SYMPTOMATOLOGY.

BY

W. FRANKLIN BAKER, A.M., M.D., PHILADELPHIA.

(Lecturer in the Department of Materia Medica and Therapeutics, Hahnemann Medical College and Hospital, Philadelphia, Pa.)

In attempting to write upon this subject the writer found so much varied opinion that it was thought the best results could be obtained from an individual analysis by the writer. What is the value of symptom repertory analysis?

At first glance we are confronted with the two great classes of observers; first, those that say pathology should be made the basis of therapy, and then again those that contend that symptomatology is the better guide. I will not attempt to interpret for any observer but will cite the figures of my own experience and also that of the National Health Census and endeavor to prove that the greatest service comes from the study of the symptom complex.

The advances we have made in pathology I frankly admit is a cultural study, but their limitations are many and I will go further and state that an observer has no right to discredit any symptom, no matter how trivial it may seem, in therapy unless he has at his command instruments of diagnosis with which to interpret those symptoms. Because they are not associated with a pathology is no reason why they should be cast aside. That they are present in a given case disturbing the dynamis is the reason for their study by an intelligent and unbiased observer. Therefore the complete analysis of the sick calls for a study of the "symptom complex" in its entirety.

The bearing of the symptoms on disease is the work of the pathologist and he misses an opportunity for service when he fails to study them. A man is not made up of air-tight compartments, each of which can be treated as an entity wholly separable from the rest of his life. Nor is a man a bundle of organs, each of which can be safely handled by a specialist, and health thereby secured. In other words, greater man, a living organism in one individual totality from center recognition is being given to the "integer" man, the whole

to circumference, therefore medical treatment of the whole man must be taken into consideration and any science which does not include the whole is deficient.

If the working of the material organization is handled from or by material factors alone, a great deficiency further occurs. This statement was made to a class in advanced psychology and shows the trend of medical opinion and is likewise a sharp blow to pathology in therapy as one can readily see it practically eliminates pure pathology and refers treatment to the symptomatic. Likewise there can be no specific or fixed therapy.

Some of the results from fixed therapy may be considered in my experience:

1. Post-diphtheric paralysis and blood degenerations have occurred in my experience to a greater degree when antitoxin was used.

2. Antitetanic serum is practically valueless.

3. Pneumococcic serum has a greater mortality than ever has been my experience in pneumonic fever.

4. In the treatment of syphilis my best results have been gained from mercurials as against 38 per cent. of multiple neuritis from salvarsan.

5. In basilar meningeal syphilis salvarsan has practically been abandoned by conservative medical specialists.

6. The Wassermann test is positive after many injections of salvarsan.

7. Of the acute pathologies many die on the operating table.

Let us consider symptoms from the following standpoints:

I. Therapy: When speaking of the use of the repertory from the standpoint of symptomatology we are to understand an analysis of the repertory that will enable one to select a drug that will be similar to the disease condition met with both in the pathological general symptoms where they are known and the symptom particulars when they are expressed, assigning the treatment of the "end pathologies" to surgery where all of the curable cases belong in this category. By an end pathology I mean a completed pathological life leading to destruction of a part. This is a very small percentage of cases, estimated about 2 per cent., leaving the majority to that class of cases where there is a symptom complex

and no definite end result or a varied pathology in more than one organ. Again there is a class of symptom complexes where there is no pathology discernible, yet the symptoms are present and demand attention, and therapy directed at these so called "peculiar symptoms" has offered to humanity a distinct service and a larger percentage of cures than the so called cultural diagnosis and therapy.

Again we have a Materia Medica based on a symptom complex and its vocational aspect is rated therefore at 82 per cent. so that the homoeopathic physician cannot afford to look over these peculiarities especially since similar symptoms have been found in provings made by drugs on the healthy. It becomes the duty of the homoeopathic doctor to analyze and arrange peculiar symptom modalities, temperamental equations, changes in size and shape, conformations, aggravations, etc., into his symptom complex before his analysis is complete. It is estimated that proper diagnosis can only be made for the specific application of therapy in 18 per cent. of cases, so that the dominant school has set aside all their chairs of therapeutics.

With this very small percentage of specific therapy based upon a materialistic pathology leading to a diagnosis we must compare the other 82 per cent. of service cases which are independent of a definite pathology or associated with general pathological conditions and assign to the symptom-guided man a larger field of work. Understand, we do not deny the value of diagnosis nor do we belittle prognosis or are we indifferent to pathology but placing each in its vocational value, we consider all as a "symptom complex" and as Pick of Vienna, one of the greatest writers in symptomatology, says: "The physician is obliged to select those symptoms from the total picture which if successfully combatted will render the greatest benefit to the patient." Therefore the treatment of the dynamic becomes the paramount issue in the case. By dynamic we understand the "symptom complex of the disturbers of harmony" no matter whether that be a defined entity of disease or not.

II. Diagnosis: Based upon the results, let us briefly review the two methods of therapy. Of all the acute pathologies a certain percentage have a tendency to spontaneous recovery, still another percentage are beyond relief even of the surgeon, but the result of investigation has clearly shown that

gross pathological lesions do not disturb the dynamic nearly as much as was formerly supposed, therefore it has been estimated that a large percentage of cases through faulty examination go undiagnosed. This could never exist with a proper study of the symptom complex which always necessitates a complete examination. Again medical as well as surgical accidents happen in about 11 per cent. of all cases and these could not be charged to either class of observers. It has also been estimated that the percentages of recovery from medical emergencies is greater than from surgical, with the proper treatment, hence we have the so called conservative practitioners.

To be sure the acute infectious diseases form a large percentage of children's diseases. The figures of the National Health Association are clear on this point, for with improvement in the general living conditions, these diseases are fast being eliminated and those subjected to infection do not develop the disease if the dynamic relationships are maintained. Much valuable time is sometimes lost by the impossibility of an accurate diagnosis, owing to lack of pathological signs, whereas many infections can be controlled by the use of the symptomatic prescription. We are forced to this in nearly all infections save diphtheria and the immunity produced by antitoxin is essentially homœopathic. So insecure is serum therapy that a mixed vaccine is usually resorted to. In tetanus my experience with serum is positively not encouraging and symptomatic Acid Carbolicum has done more for me than serum. If one will analyze Hahnemann's percentage of cures in symptomatic cholera he will find it as satisfactory as Gorgas' experience in the Canal Zone.

Reviewing these terse facts, therapy ought to be based on repertory analysis and removed from the pathological departments whose therapy is one-sided. This is clear from the low percentage of its use.

Let us review briefly and ask why:

1. In 92 per cent. of post mortems we find healed tubercular lesions?

2. Pathology has not developed a specific and single organism for therapy?

III. Selection of Remedy: There are many other reasons for the use of the "symptom complex" and since therapy is optional except in contagious cases, there are some other

factors to be considered. It is estimated that there is as much contagion not reported to public Health Boards as reported.

Eighty-seven per cent. of gross lesions are not reported to the physician in time for therapy.

Personally 49 per cent. of my recommendations for surgery were refused by the patients.

Eighty-seven carefully diagnosed cases treated in the schools refused further therapy.

So that when one reviews the stumbling blocks in the road of therapy he is not far wrong from any angle of service in accepting the "symptom complex" because it includes all the service problems of medicine and prevents hurrying a diagnosis and chance of error.

Hahnemann has taught us, and it is now recognized as scientific advance, that the greatest harm and danger can come to the individual through the dynamic disturbance, and the only system of therapy recognizing this in therapy is the homoeopathic.

The disturbances recognized by the patient are:

1. Most complained of and feared symptom.
2. Pain.

Our symptom complex will take note of:

1. Pathological symptoms.
2. Dynamic symptoms.

In conclusion let me state that there is no specific in medicine, conservatism knows no fixed therapy, pathology has added but little light to symptomatology and there is left no broader method than the analytical symptom examination. It relieves the psychic in disease, one of the most important steps in therapy, prevents errors in diagnosis, suggests therapy and differentiates symptoms. My method of using the repertory consists in using the danger symptom first and explaining the same to the patient where such explanation is necessary, then taking the most complained of symptom and lastly the "peculiar" symptom and by cross reference decide upon the remedy. If no curative action results then a change of potency and still if no effect, review all premises of the case.

THE RECTUM IN LOCOMOTOR ATAXIA.

BY

BY JAS. D. SCHOFIELD, M.D., PHILADELPHIA.

In tabes dorsalis the degenerations occurring in the posterior columns of the spinal cord, and in the peripheral nerves must necessarily cause great disturbances in functions which are particularly noticeable where complete co-ordination depends upon a perfect balance of the motor, sensory, and reflex mechanisms. Thus it is that the latter, governing micturation and defaecation, show signs of any nerve degeneration very early in the course of the disease.

Among the early rectal symptoms of locomotor ataxia may be mentioned constipation, disturbances in the sensation of the anal skin and the rectal mucosa, lessened myotatic irritability of the anal sphincter, and paroxysmal attacks of pain in the rectum. We may also have more or less loss of the voluntary control of the bowels.

Results of Muller's research work seems to show that the centers governing both the acts of defaecation and micturation are situated in the sympathetic system and not in the spinal cord.

Sahli epitomizes Muller's researches as follows:

"If the spinal cord of the dog is divided above the sacral segments, or if the sacral segments are extirpated, the result is practically the same. At the first there is retention of the urine and of the faeces. After a time, however, this urinary and rectal retention disappears, and is replaced by periodic evacuations differing from the normal only in that they are involuntary. Since this re-establishment of periodical evacuations occurs even after complete extirpation of the lumbar and sacral cord, the central mechanism of these functions evidently must be situated outside of the spinal cord in the sympathetic system.

"Extirpation of the lowermost portion of the spinal cord, or simply transverse section is followed by a complete loss of the influence of the will upon the evacuations of the bladder and rectum, and such evacuation becomes purely automatic, as may be recognized from the condition of the animal. The animals are, of course, anaesthetic for the process of evacuation. Immediately after extirpation of the sacral cord the anus gapes from the paralysis of the striated sphincter, but

gradually becomes closed, evidently as a result of the vicarious action of the involuntary musculature of the internal sphincter. The striated sphincter, however, remains paralyzed, and the anal reflex is permanently destroyed. If the spinal cord is simply divided above the sacral segment the tonus of the sphincter and the anal reflex are maintained. In fact both may be even accentuated."

From these experimental data it is easy to assume: (1) that the actual centers for the evacuation of the bladder and rectum are situated outside of the spinal cord, in the sympathetic system; (2) that motor fibres reach this sympathetic apparatus through the spinal cord by means of the rami communicantes from the lumbar and sacral segments; and (3) that the motor fibres for the striated muscles of the pelvic floor which effect the voluntary closure of the bladder and rectum arise directly from the spinal cord, and have nothing to do with the sympathetic. The sensory impulses to the brain are necessarily conducted by the spinal cord. According to this conception the only part played by the spinal cord in the vesical and rectal functions is that of conduction of sensory impulses to the brain, and of the voluntary cerebral impulses for the innervation and relaxation of the striated vesical and rectal sphincters, and for the innervation of the abdominal tension.

Clinical observations have given some very interesting data confirming in many instances the results obtained by experimental research. Digital examination of tabetic cases all show a sensory paralysis of the external sphincter to some degree. When the finger is introduced into the rectum and a firm pressure in a lateral direction is made upon the internal sphincter, the anus can be made to relax to such an extent that a good view may be had of the lower rectum without the use of a speculum. At the same time considerable power seems to remain in the internal sphincter. This phenomenon appears to be caused by the fact that when the internal sphincter is dilated by pressure there is no reflex contraction of the external sphincter, which, under ordinary circumstances would contract firmly about the finger, cutting off any view of the lower rectum. In some cases of tabes another peculiarity is sometimes noted, namely, that when the finger is withdrawn the anus does not immediately contract, but remains patulous. This is due to the loss of muscle sense, the patient being un-

aware that the sphincters are relaxed. In a short time, however, the internal sphincter closes involuntarily, and the anus is pulled back to its normal position by the contraction of the levator ani muscles. In nearly all cases we will find sensory paralysis to a greater or lesser degree. This holds good in paretic patients as well. Tabetic cases as a rule have marked anaesthesia of the anal skin and of the lower rectal mucosa. Practically all are constipated, excepting those who have gone on to the stage of having periodical evacuations without any voluntary control. The administration of cathartics will cause a sudden and almost uncontrollable evacuation of the bowel. Many of these patients will develop the so-called rectal crises. The attacks of pain are lancinating in character and frequently agonizing in intensity. They come on suddenly without warning and last from a few seconds to several minutes, disappearing suddenly and completely. These pains are generally more frequent and worse at night, but not always. One case had attacks in morning upon arising from bed, but at the present time is having them several times a day. After the pain leaves there is a feeling of exhaustion which lasts for some time. The time of these attacks of pain does not seem to hold any relation to the condition of the rectum, whether the rectum is full or empty or whether before or after stool, and the expulsion of flatus does not bring any relief from this annoying symptom. There is always that feeling of fullness and weight in the rectum, as if the bowels should be evacuated but attempts at stool give neither a passage nor relief from this feeling. Few of these cases show any marked rectal lesions, such as fissures and haemorrhoids and seldom congestion of the rectal mucosa, and when present the removal of these conditions affords little if any relief.

At times the internal sphincter seems to be firmly contracted due to a compensatory action of this muscle to make up for the lack of power in the voluntary muscle. This condition associated with lessened peritalsis, only accentuates any existing constipation. The anaesthesia of the rectal mucosa robs the patient of any desire to stool, which a full rectum would otherwise render imperative. As the rectum becomes more and more distended the patient must go to the toilet as soon as he has any knowledge that his bowels need evacuating, otherwise he is likely to have a complete movement of the bowels without any voluntary control. In the more ad-

vanced cases, of course, the expected periodical incontinence becomes more and more pronounced. In examining these patients we often find the underwear and the perineal region soiled with mucus and faeces caused by the gradual leakage which is unnoticed by the patient. This often occurs even while the patient is complaining of his severe constipation, producing an anomalous condition of faecal incontinence with constipation.

Where we have extreme contraction of the internal sphincter associated with relaxed external muscle, the anus is apt to assume a funnel shaped appearance, simulating that condition which Tardieu ascribes to the practice of passive paederasty. Some cases have a partial prolapse of the anal skin and of the rectal mucosa in addition to which there may be an extreme hypertrophy of the cutaneous margin of the anus. This may be so pronounced as to resemble the labia majora of the female to a degree.

In the early ataxic stage the constipation and the spasm of the internal sphincter may be relieved by a divulsion of the sphincters associated with the routine use of a mild laxative. Later on, however, when the rectal anaesthesia becomes more pronounced, the relaxed condition of the sphincters caused by the divulsion may produce such annoyance that it is a question whether a divulsion is justifiable, many cases having added to their pain a very annoying incontinence.

The treatment of these cases is, of course, heroic, antispecific treatment: Arsenical solutions, intravenous and intraspinal, always in the hands of an expert; mercury and the iodide of potash. If any rectal irritations exist, fissures, hemorrhoids, infected crips, large papallae, etc., should be cleared up. For the constipation probably the best results can be obtained by the regular use of mild laxatives. The patient should be encouraged to make periodic attempts at stool, and should try the effect of massage over the colon and lower abdomen. Small doses of the alkaloid of the ripe seed of the calabar bean stimulate peristalsis nicely in some cases, a morning dose of sodium bicarbonate is enough if the case is a mild one.

In addition to the alimentary tract we should be on the lookout for symptoms pointing to urinary retention or vesical paralysis.

To sum up: As rectal symptoms come on very early in

the course of tabes, I add my plea for an early recognition of the condition. Often they are the only symptoms which bring the sufferer to the physician. Only recently I saw a man who applied for treatment, complaining of a vague pain in back, low down, with constipation. Nothing was found in the medical department to warrant a diagnosis and he was refered to the rectal department for examination, which revealed nothing but a slow, lax, lazy acting sphincter which was not as sensitive as it should be, some enlargement of the prostrate gland. A Wassermann test was advised which proved positive. This and the further examination of the reflexes which were not affected to a great degree, cleared up the diagnosis. The only venereal history was gonorrhoea, twelve years ago.

The physician who will diagnose and have the proper treatment instituted at this stage of the disease will prolong life and prevent horrible suffering.

CHRONIC NEPHRITIS—ITS MORE ACCURATE DIAGNOSIS AND PROGNOSIS.

BY

BY HENRY A. HIGLEY, M.D., BROOKLYN, N. Y.

Since chronic nephritis was first described by Bright, the accuracy with which the condition can be diagnosed and the reliability of the prognosis in each individual case have seen steady advancement. This advancement, although continuous, can be separated into several well defined periods. In the beginning there was a period in which the presence of albumin in the urine was thought to be pathognomonic of the disease. As time advanced this view was found to be erroneous and the second period of diagnostic advancement was that in which the presence of casts in the urine, with or without the presence of albumin, was held to make the diagnosis of nephritis absolute. This second period of advancement was of considerable duration but as evidence accumulated it began to be seen that conditions other than nephritis were accompanied by both albumin and casts in the urine and hence these latter gradually lost their diagnostic significance. The third period of advancement began with the inception of blood pres-

sure observations. This period was without doubt the most important period of advance which had as yet occurred. The increased blood pressure in addition to the presence of albumin and casts in the urine positively enabled the inclusion or exclusion for diagnosis of many cases. Likewise the increasing blood pressure made much more reliable the prognosis in each individual case. In the course of time, however, it was found that while the presence of increased blood pressure with albumin and casts in the urine always meant a diagnosis of nephritis, that the absence of increased blood pressure in early cases did not invariably mean that a nephritis was not present. Thus not infrequently the diagnosis of the early cases was lost. Likewise in prognosis, it was found that in general an increasing blood pressure signified a bad prognosis but that not infrequently cases progressed unfavorably when the blood pressure showed no marked tendency to rise. These facts, to a certain and well defined extent, limit the value of blood pressure findings in the diagnosis and prognosis of nephritis.

The fourth period of advancement was signified by the introduction of blood chemistry into the diagnosis and prognosis of the disease. By this means it became possible to ascertain the amounts of various excretives in the blood, such as non-protein nitrogen, urea, uric acid and creatinine. The fact was soon established that these substances were increased in amount in the blood in nephritis. At first chief attention was given to the non-protein nitrogen which is another name for the combined nitrogens of urea, uric acid and creatinine. The facts obtained showed that while the non-protein nitrogen was increased in the blood in nephritis, that it was also increased in other conditions and furthermore, that in early cases of nephritis, the very cases it was desired to detect since they escaped the previous methods, the increase was often not sufficient to allow of positive opinion for or against the diagnosis of a nephritis. Thus so far as diagnosis is concerned it was but little if any advance over the blood pressure method. In prognosis, the blood increase of non-protein nitrogen was found to be somewhat more reliable than in diagnosis but still not sufficiently so to be of overwhelming value. Estimations of non-protein nitrogen are hence not to be considered of great value in the diagnosis and prognosis of nephritis.

Attention was next paid to blood estimations of urea,

uric acid and creatinine in the order named. It was soon demonstrated that blood estimations of these substances were of much greater value for purposes desired than were blood estimations of non-protein nitrogen. It was conclusively shown that in early nephritis, the first of these substances to be increased in the blood was uric acid. As the disease progressed the next of these substances to show blood increase was urea. Finally, as the case neared fatal termination, high amounts for blood creatinine began to appear. This definitely proved that so far as these substances are concerned, nephritis may be divided into three distinct stages: First, the early stage of high blood uric acid; second, the medium stage of high blood urea, and third, the late stage of high blood creatinine. This, of course makes blood uric acid entirely a diagnostic test and blood urea and creatinine entirely prognostic tests. In this state the subject has remained until recent date. As thus carried out the early diagnosis and reliable prognosis of nephritis have been vastly improved over any of the former methods. Unfortunately, however, more extensive observations have shown that so far as uric acid for diagnostic purposes and urea for prognostic purposes are concerned, the method was open to certain objections. Thus at times fallacious judgments were formed from its use. With uric acid it has been proven that many other conditions show its increase in the blood. Furthermore, at least 50 per cent. of the blood uric acid is directly dependent upon the diet. In the case of urea it is known that 85 per cent. of the blood urea is directly dependent on the diet. In the face of these facts it is at once evident that mere blood increase of uric acid or urea is not sufficient for the diagnosis or prognosis of nephritis unless the diet is carefully controlled and many other conditions carefully excluded. This has left an uncertainty with respect to the work which has given rise to many unsatisfactory clinical results. Thus where mere blood estimations of these substances have been undertaken the practitioner has been unfavorably impressed regarding the practical results.

The fifth and present stage of advancement in the diagnosis and prognosis of nephritis is a refinement and more careful adaptation to each individual case of the fourth stage. It is based upon the self-evident fact that the object to be attained by the work is the demonstration of an impaired renal

membrane for purposes of diagnosis, and the demonstration of its progressive degree of impairment for purposes of prognosis. Stripped of all unnecessary appendages, the kidney consists merely of a membrane, called the renal membrane. On one side of this membrane is the blood. The various substances pass from the blood through the renal membrane to the urine on the other side—this is diagramatically represented as follows:

Blood	Renal Membrane	Urine
Uric Acid	.....	Uric Acid
Urea	.....	Urea
Creatinine	.....	Creatinine

Extensive observation has shown that uric acid, urea and creatinine pass through the renal membrane with very different degrees of ease. Uric acid goes through the membrane the most difficult, at the rate of 20 to 1, urea passes through much more easily at the rate of 80 to 1, and creatinine still more easily at the rate of 100 to 1. That is to say, in a given amount of urine, say 100 c.c., there is 20 times as much uric acid, 80 times as much urea and 100 times as much creatinine as there is in the same amount of blood. So long as these proportions are maintained, irrespective of the amounts transmitted, the renal membrane is normal. An impaired renal membrane is only shown when the above proportion is destroyed—that is, when a given amount of urine, say 100 c.c., contains less than 20 times as much uric acid, less than 80 times as much urea and less than 100 times as much creatinine as the same amount of blood. This is schematically shown in the following diagram:

Normal Kidney		Normal Kidney, with Increased Blood Excretives.		Nephritic Kidney Retention.	
Blood per 100 c.c.	Renal Membrane Normal	Urine per 100 c.c.	Blood per 100 c.c.	Renal Membrane Normal	Urine per 100 c.c.
Uric Acid = 1	Uric Acid = 20	Uric Acid = 2	Uric Acid = 40	Uric Acid = 1 x 5	Uric Acid = 15
Urea = 1	Urea = 80	Urea = 2	Urea = 160	Urea = 1 x 20	Urea = 60
Creatinine = 1	Creatinine = 100	Creatinine = 2	Creatinine = 200	Creatinine = 1 x 20	Creatinine = 80

The figures are schematic.

From these facts, it is evident:

1—A high amount of blood uric acid, urea or creatinine does not necessarily mean the presence of an impaired renal membrane.

2—Perfectly normal amounts of blood uric acid, urea and creatinine may be present with an impaired renal membrane.

3—A normal renal membrane is always present and a diagnosis of nephritis negatived when the normal rate of transmission of these substances is present, wholly irrespective of the amounts of these substances in the blood and urine.

4—An impaired renal membrane is always present and a diagnosis of nephritis affirmed when the normal rate of transmission of these substances is reduced, wholly irrespective of the amounts of these substances in the blood and urine. For purposes of safety it has been thought best that the figures should be distinctive and that the normal rate of transmission should not be regarded as reduced and an impaired renal membrane and a nephritis thus diagnosed unless uric acid is passing through the renal membrane at a rate of 15 to 1 or less, urea at a rate of 60 to to 1 or less and creatinine at a rate of 80 to 1 or less.

These tests should be known as uric acid, urea and creatinine retention tests. They require for their performance a specimen of blood and a specimen of urine taken from the patient *at the same time*. No 24 hrs. specimen of urine is required. Estimations are then made from the blood and from the urine, *the same method of test being employed for each*. The rate of transmission is obtained by dividing the urine amount by the blood amount. The diet of the patient does not need to be taken into account.

It should be borne in mind by the practitioner that these tests should be used with a definite aim in view for each test:

1—Uric Acid Retention is always the diagnostic test.

2—Urea Retention is always a prognostic test—and its presence denotes the second stage of the disease.

3—Creatinine Retention is always a prognostic test and its presence denotes the third stage. If it cannot be relieved it denotes the approaching fatal termination of the case.

Experience has shown that uric acid retention is present

very early in the disease, before the blood pressure raises or the urinary signs are any more than merely suggestive. It is hence of great value in the early recognition of the disease.

The effects of treatment and the present status of a nephritis when the patient is taken with some intercurrent disease or is pregnant or is about to undergo operation, can be definitely determined by the urea or creatinine retention tests.

Specially should it be noted that if urea and creatinine retention tests are used as diagnostic tests fallacious judgments will frequently be obtained as the cases may be genuine cases of nephritis but not have as yet reached the urea or creatinine retention stage.

Galen Hall,

184 Joralemon Street, Brooklyn, N. Y.

Syphilis as a Cause of Backache.—(Percy Willard Roberts, New York, *State Journal of Medicine*, 1919, vol. xix.) The cases of back pain which have been observed in this study fall under the general classification of myositis. Their symptomatology suggests irritation of muscle and fibrous tissue by some toxic material, and the degree of discomfort ranges from dull lumbar backache to acute pain on any attempt at motion. Except for tenderness on deep pressure in the gluteal and lumbar regions, no characteristic features have marked these cases, and the diagnostic perplexities they presented may be judged by the fact that they had been treated for a variety of disorders including uterine displacements, sacroiliac strain, Pott's disease, scoliosis and floating kidney, and in one woman a diagnosis of carcinomatosis was ventured. While it has not always been possible to demonstrate the presence of syphilis in these patients, the fact remains that they all presented certain evidence of an hereditary taint and that the symptoms cleared up under mixed treatment. Throughout this study of orthopedic conditions due to inherited syphilis, a clue to diagnosis has been found in the teeth. It is not to be assumed that any dental anomaly is conclusive evidence that the patient has syphilis. Proof is still lacking that these peculiarities are always of luetic origin. It may be said, however, that they occur with extreme frequency in congenital syphilitics and that they have so often furnished a clue to a correct diagnosis that their clinical significance cannot be overlooked. Some striking results have been obtained by adapting this theory to joint disease. We are not justified in making a diagnosis of tuberculosis in these cases until syphilis has been positively eliminated by the therapeutic test, and, while the author's experience with backache is limited, there is sufficient evidence that backache may in some instances be due to a myositis caused by syphilotoxins to warrant further investigation on the subject. —*The American Journal of Syphilis*, April, 1919.

EDITORIAL

CLINICAL RESEARCH AND STUDY OF SYMPTOMS.

We find in the introductory number of the Oxford Loose Leaf Medicine a chapter on the future of medicine by Sir James Mackenzie. This brought to mind Dr. Mackenzie's former prediction on the principles of diagnosis and treatment in heart affections, and we remembered the great pleasure that we derived from perusing the first chapter of that remarkable work. Thus reads the title of that chapter: "Medical research: The progress of medicine will be hampered and delayed until the general practitioner becomes an investigator." Never was so much truth put in a single sentence. Next, Sir James advances a proposition which everyone knows to be true, namely, clinical research at the present day deals with disease at an advanced stage. Much importance has been attached to the study of the physical signs of disease, so much so indeed, that very many physicians are inclined to ignore illnesses that give no objective evidence of their being. The physical sign always implies advanced disease, at least so far as clinical results are concerned. The information derived therefrom is obtained therefore, at a time when we may hope at the best that disease may be arrested, leaving an impaired organ. As Sir James expresses it: "The chief efforts of the profession have been spent in the recognition of the more chronic diseases after they have killed the individual or when they have gone beyond the stage of cure."

The second proposition is *"The investigation of the early stages of disease has not yet been seriously undertaken."* It is well known by those engaged in consulting and special practice that very many if not nearly all the illnesses appear before them at a time when they are irremediable, and as a result there is a disposition to blame the general practitioner for the unfortunate state of affairs. Rather we should criticize the condition of medical science which does not provide measures for the early diagnosis of such illnesses. Even though the patient consult his physician at a time when there

are no signs present, the latter is not provided with any means of establishing a diagnosis excepting one based upon mere suspicion. So the complaint passes unrecognized. Sir James instances the *so-called early* diagnosis by X-ray of pulmonary tuberculosis, when as he truly says the tissues of the lung have been damaged already by the bacterial invasion, and that the disease is by no means in its early stage.

A third proposition is: *"The patient's sensations give the first indication of the invasion of the body by disease, but we are not capable of interpreting them aright."* Who will doubt this proposition? "It is sometimes wonderful how physicians with experience can recognize the nature of a complaint from the disjointed remarks of the patient himself. This knowledge the young physician has not acquired; the older physician has got the knowledge through past experience, and the misfortune is that the knowledge is to a great extent personal, and cannot be conveyed by its possessor to others." "We must learn to recognize that where we fail to detect disease in the absence of physical signs, this failure in reality proves only our own incompetence. The facts are there but we are not sufficiently well educated to make use of the great source of information they constitute. As I have said, the sensations of the patients should be as carefully studied as the details of an experiment in a laboratory, and that not only the sensations but all the associated phenomena that may appear with them synchronously or at a later stage, should be carefully noted and correlated."

The fourth proposition needs no comment. It is: *"The proper appreciation of the patient's sensations enables us to understand many obscure complaints, as for example the recognition of abnormal heart action."* If a heart action is disturbed, there must be something wrong, and it does not always do to say, "Oh, just a case of nerves." The importance of this subject is attested by the present day efforts at studying means of determining the functional capacity of the heart.

5. *"The observer himself must be trained before he can interpret the sensations of abnormal heart action."* All men, we will say, have excellent acuity of sight and hearing; but all men do not necessarily see and hear. Experience trains the eyes and ears, so that in the end what appears to be remarkable similarity at first, ultimately becomes marked dif-

ferences in which the skilful observer can discover no similarity whatever.

The sixth proposition is: *"This lack of appreciating the significance of the patient's sensations is shown in the attitude of the profession towards pain."* Very little is known concerning this subject. It is true, of course, that the pains in certain localities like those refer to gall bladder and the appendix now receive general recognition. It is only within a comparatively few years that the substernal pains of aortitis have received proper recognition, and yet the existence of such pains has been known for years.

The seventh proposition is: *"The study of pain, its site, radiation, and accompanying phenomena, reveals the mechanism by which it is produced."* So far this must remain in great part a mere theory which experience, however, is likely to elevate to a demonstrable fact.

The eighth proposition is: *"The patient's sensations must be studied while they are present, and all associated phenomena carefully noted."* To this proposition we would add that the patients' condition must also be studied as carefully during the intervals between symptoms.

The ninth proposition is: *"Bacterial invasion gives rise to sensations, and it is likely that each organism gives rise to peculiar sensations."* Herein Sir James has advanced a proposition with which we are in strong sympathy. Like causes should always give like effects; two and two make four, not once, but always. It is not at all unreasonable to believe that inasmuch as specified bacteria act deleteriously in a specified way, that we should have a characteristic symptomatology for each variety. Mixed infections necessarily must produce departures from the typical clinical picture of each type of infection. This question is strictly analogous to studies of drug action. Drugs are known to produce different effects. Drug mixtures produce departures from these effects.

The tenth proposition is: *"To acquire a knowledge of the life-history of chronic diseases it is necessary to be able to follow individual cases from the start to the finish."* No one has the opportunity for acquiring this knowledge excepting the general practitioner or family physician. Unfortunately he also is the man who in the past and for the present is doing little or nothing to enrich medical literature. He is the only person who has any practical knowledge of the early

stages of disease before the appearance of physical signs. Our knowledge of diseases in their entirety is based upon the studies of a large number of individuals seen in different stages: all the stages are never seen in one individual. Hence it is that our knowledge of any ailment which pursues its course for months or years is patchy and imperfect and does not form a basis on which to lay a safe and sane prognosis or to build up rational treatment.

Propositions 11, 12 and 13 need no comment. They are as follows: *"The knowledge of the progress of disease reveals the meaning of abnormal signs and constitutes the basis for an intelligent prognosis." "Investigation of prognosis can only be carried out by those who have the opportunity of watching individuals during the whole course of the disease." "A misconception of how a knowledge of prognosis can be acquired has led to an inability to appreciate the results obtained by the method described."*

The fourteenth proposition is: *"Opportunity for investigation in hospitals is too restricted."* This is very true, and yet physicians the world over prefer hospital to dispensary service. The stay of patients in hospital wards is seldom, if ever, longer than three months, and when one considers the duration of their illnesses this is altogether too short a period for any practical results. In dispensaries, opportunities are the same as those afforded by private office practice, indeed we might add that now that dispensary service is supplemented by the aid of social service departments and laboratory technicians, dispensary service puts the hospital experience in a shadow and will become increasingly popular as a means of education of physicians.

In closing we give our strong endorsement to the last two propositions: *"The general practitioner is the only investigator that has the real opportunity." "A new spirit is essential to medical research."* We have listened with interest many times indeed to the criticisms of physicians concerning the high class medical literature of the day, dealing as it does with highly technical bacteriological and chemical work, much of which is beyond the capabilities and the understanding of many excellent clinicians. This work has so hypnotized the profession at large, as to make its members feel incapable of advancing any new ideas of their own. Such work has its value, and the energies of those engaged in it should not be

limited in the least. On the other hand, the general medical man should manifest a new spirit and should show by his careful study and analysis of cases that he can engage in medical research to the good of humanity.

PROBLEMS IN MEDICAL EDUCATION: II, ENDOWMENT OF MEDICAL COLLEGES.

In olden days, all medical educational institutions were what is now known as "jack-pot colleges," by which is meant that each year after paying all bills, the faculty divided among themselves what remained in the treasury. As medical colleges were then conducted, the financial results to those engaged in the business were profitable. This state of affairs has fortunately gone into the discard and will never return. In its place there has been built up a system of medical education in all things praiseworthy. Unfortunately, however, this system has proven to be very expensive, involving as it does numerous all-time teachers who must be paid living salaries and the limitation in the number of students in the different classes so that individual ward teaching and laboratory instruction become possible. Estimates of the cost of such a system seem to prove that the actual expense attendant upon the medical students' education amounts to somewhere between four and five hundred dollars per annum; while the student pays but from one hundred to two hundred dollars per annum for his tuition. In the large, heavily endowed universities it is very evident that the system can be maintained, but in the small independent medical colleges it is evident that something must be done in the way of endowments to make up the deficit. Inasmuch as medical students cannot afford to pay the fees required to keep an institution on a strong financial basis, it is evident that the authorities in charge of medical colleges must get busy to secure endowments.

Among the large universities, the endowment problem is not a difficult one, as all of them number among their alumni numerous men of high financial prosperity. These do not hesitate to put their hands in their pockets liberally to supply the needs of their alma maters, and what is more, work

actively in securing outside friends for their favorite institutions.

With medical colleges it is different. There are very few doctors who attain a state of wealth which will warrant them in giving large sums to their alma maters for endowment purposes. Moreover the demands of medical practice are so exacting that physicians have but little time for awakening interest in the subject among the laity. They have no time for altruism. It is evident, therefore, that we must look to the laity as active leaders.

The average layman is too apt to look upon requests for help as a mere question of providing expenses for vocational instruction of individuals who are unwilling to pay for it themselves. Perhaps this is true in vocations or professions other than that of medicine. Medical practitioners are assuming more and more importance in the affairs of the community. To them is now intrusted matters of public health and hygiene, upon them we depend in large part for the work attendant upon the efficiency of industrial communities. In the late war medical men were important factors in the operation of the selective service law, and subsequently became necessary in the care of our troops in trenches, battle fields and camps. All of the above are in addition to the old time duties of the doctor, namely, that of looking after the health of the individuals or communities. Is it not necessary, therefore, that the medical men shall be educated, and well educated at that? Medical colleges must be. We cannot do without them. Is anything more needed to prove to the laity the importance of their financial assistance?

The friends of medical colleges must, therefore, interest all the charitably inclined in the endowment problem. One trouble in the past, and we believe it to be a very great one, is that those actively interested have been thinking too much of the gathering in of large sums of money. Let us think of the business principles of the Catholic church, which for ages has solicited contributions both large and small, not despising even the insignificant penny. These sums have been wisely taken care of, added to from time to time, and the world knows the result. Let those interested in college endowment take this lesson to heart and despise not the small sum, not forgetting in the meanwhile that large contributions are likewise gladly received. All alumni are not so favorably

situated as to secure big money, but *everyone can do a little* and *it is plainly his duty to get busy.*

Another method of getting endowments is through the medium of a salaried field secretary, who will make it his business to visit college alumni in various towns, state the situation carefully and endeavor to secure funds. Such a system demands the employment of a good man on a living salary. It is generally estimated that this will involve an expenditure of from five to ten thousand dollars per year. It has been proposed that the field worker be paid on a commission basis. This is objectionable in that it is very plain to the charitable that out of each dollar contributed the beneficiary receives but 75 to 90 per cent. This usually rubs the contributor the wrong way and so he refuses to give. If the solicitor is a salaried man it looks different.

When a campaign for college endowments is started it must be maintained from year to year. It should never be permitted to lag, for however successful it may be in twelve months, there will never be enough taken in to place the insituation on a firm foundation. Work must go on.

THE DEARTH OF NURSES AND THE NECESSITIES FOR THE TRAINING SCHOOLS.

During the influenza epidemic the supply of trained nurses for the community was entirely inadequate. In fact it might be said tragically so. This sad condition depended upon two factors: first a demand greater than the world had ever before seen, together with a greatly diminished supply by reason of the absence of 50 per cent., at least, of the nurses in the government service. With a return to normal conditions, it is still evident that there is a scarcity of nurses, both in the general field and in the hospital training schools. If relief does not come shortly somebody or some interest must suffer.

The requirements for admission to a training school include the equivalent of a high school education and an age limit between 21 and 32 years. Immediately following her acceptance by the training school committee, she is placed on probation for a period of 30 days and possibly of more, during which time the superintendent of the school has full op-

portunities to decide as to fitness of the applicant for taking up nursing as her life work. In reality, these 30 days observation have more to do with the fitness of the applicant than any of the rules, for unless a woman has within her the qualities that make a nurse, no amount of training can compensate for her deficiency.

The pay received by nurses after graduation is good, sufficiently so to make the occupation financially attractive to the person who loves the work. Notwithstanding this there is scarcely a training school in the country that is not operating with an inadequate force of nurses. Efforts without number have been made to encourage young women to enter the profession, and the dearth continues. The rules governing admission appear to be entirely reasonable: no one can object to the requirement that a nurse possess a high school education, nor that her handwriting and orthography shall be open to inspection and criticism. The great difficulty to our mind, however, lies in the requirement that the applicant be from 21 to 32 years of age, and herein we feel is the crux of the whole matter. It would be much better indeed if candidates were accepted immediately following graduation from high schools or academies without respect to age. The average age at which girls graduate from these institutions is 18; an average period of three years must therefore intervene before she takes up her life work, during which time she must be engaged at something. If that something turns out to be a success she gives up her ambition to be a trained nurse; if she is a failure she has nursing to fall back upon, and therefore takes it up, not so much because she wants to do so, but because she has been a derelict in other directions. Between the ages of 17 and 21 the majority of young women meet their affinities. If everything goes well a nursing career is blighted; if it does not, we have as a candidate an individual devoted to doing good in the world, or one soured by her unfortunate experience. Notwithstanding all this, it is alleged that one-half the nurses give up professional life within five years of graduation because of marriage.

We favor strongly a removal of the early age restriction so that girls shall come to the hospital fresh from school training at a period of life when learning is easy, and respect for authority and the opinions of their elders still remains. We believe that not only will the number of candidates for train-

ing school admission be increased, but we will also have a better quality.

We believe furthermore that the admission to training schools will be increased if certain household duties now imposed upon the nursing force were relegated to servants and orderlies. This unfortunately involves expense which hospitals can ill afford. We do not favor the entire abolition of household duties because there are some of these which every woman should do, and which every true woman will do by reason of her feminine instincts if these are drilled into her during her training school days. She is all the better by reason of that fact.

We really feel that the chief reason today that prevents the full quota of pupil nurses in training schools is the age limit. Make the age limit high school graduation, and the number of applicants will be doubled at once. A little more liberality in hospitals respecting physical duties will add somewhat to the number, although in the institutions with which we have been connected this has never been a source of dissatisfaction. In New York, we understand, it has constituted a serious difficulty. In the above we are speaking for ourselves from our own standpoint. We do not presume to speak *ex cathedra*. Each person must have opinions on the subject, discussion and criticism of which must be of value to the hospitals and to the schools.

A CHALLENGE TO SCRAP MEDICAL LICENSURE AND ITS ACCEPTANCE.

THERE was held in Philadelphia on December 6, 1918, the seventh conference of Industrial Physicians and Surgeons. At this conference Mr. C. B. Auel, who is described as "Director, Standards, Processes and Materials, Westinghouse Electric and Manufacturing Co.," delivered an address on the "Responsibility of the Industries towards the problem of the physical reconstruction and industrial rehabilitation of the war and industrial cripples."

In the course of this address he availed himself of the opportunity to throw slurs and insults at the medical profession, and then he said:

"In addition to the preceding there is one other matter in which you have my profound sympathy. I refer to the

necessity of obtaining a license before you can practice in this state. No doubt such a device may have been required when Pennsylvania was the only civilized state in the Union, but I submit this law has long since outlived its usefulness and should be placed in the library at Harrisburg as a relic of a by-gone age.

"In its stead I would like to see a course in penmanship established, such a course being made retroactive and every physician in the state compelled to subscribe, so that the average prescription would look less like a Chinese laundry sign."

Respecting this latter paragraph; in writing Mr. Auel probably has little or no occasion for handling a pen himself, all of his writing probably being done by a force of stenographers, paid for by the Westinghouse Company at market rates.

Concerning the first paragraph quoted; we will treat our readers to the magnificent reply made by Dr. J. M. Baldy, as follows:

"It was with astonishment that I heard a proposition put before you this morning that we scrap licensure. This was applied to Pennsylvania; but, of course, the principle goes to every State in the Union, and spreads from there to every country in the world. This is a notable example of one man putting his opinion against that of all mankind; the German Kaiser did that and you all know what happened to him. I have no doubt that the same thing would happen to a man who at this day talks of scrapping that which the whole civilized world has been building up for a generation or more.

"We all heard, this morning, from the same gentleman from Pittsburgh, a representative of the Westinghouse Electric and Manufacturing Company, the beautiful story of the ladder and the doctor coming back for more chalk for the purpose of writing his sins on the rungs. I would advise that, in offering criticism of your fellow practitioners in civil life, you be careful to view your own side of the question and see whether you, as industrial surgeons in control of industrial institutions, do or do not sin equally as they sin.

"Of course, we are all agreed that some medical men in civil practice have been asking too much for their services and have taken advantages of the limits allowed by the law; but is not that the type of men who would come in by non-licensure? And is it not the result of a low grade of medical education and bringing blackguards into the profession, instead of gentlemen? Certainly; and this is what we are asked

to return to. We are asked to go back, to the old way of producing this type of men; because, during the recent war and the recent epidemic, the Westinghouse Company has had difficulty in filling the ranks of its assistant physicians. Well, the whole world has had the same trouble, and are the industries going to whine, as the Germans are whining today and lose the respect of the world, because they have had to bear their share of discomfort for the sake of the boys over there?

"In the early days of Christianity there came before Jesus of Nazareth a woman accused of adultery; and the crowd said: 'Lord, the punishment is death by stoning.' And He said: 'He who is without sin among you, let him cast the first stone'; and within a short time, He opened His eyes and saw that all had gone but the woman, who still remained, unstoned. And He said: 'Woman, hath no man condemned thee?' and she said: 'No, Lord.' And He said: 'Neither do I condemn thee; go thy way in peace, and sin no more.'

"Now let me tell you, as administrator of the law of Pennsylvania, that you had better be careful how you throw stones, but profit by the modesty of the gentlemen who made this accusation of the woman before Jesus of Nazareth and withdraw in time. Your brothers in civil life have sinned, but not more than you in industrial life have sinned against those to whom you pretend to bring aid. There has in the past been more harm done, and more cripples have been made in the industries by maltreatment on the part of doctors than by industrial accidents themselves. We all know lots of people permanently crippled who could have been put on their feet, had they had a doctor with a decent knowledge of his profession. They have been ruined for life, and compensation has had to be paid them by those in industrial concerns. Now, if you are going to scrap licensure, where is your check on the type of men who are doing and will continue to do this sort of thing? And that is what you men are trying to do, consciously or unconsciously.

"I have coming to my desk frequently complaints that different men employed in industrial concerns are not licensed; and on investigation, I find that they have been rejected after examinations several times as having small knowledge of their profession. In other words, you are bringing to Pennsylvania men who are not entitled or worthy to practice here. You are bringing in incompetent help, because it is cheap labor. We have had, throughout this war, a large number of men making efforts to come into this state and they are almost constantly employed by you gentlemen in industrial concerns.

They are unlicensed. They have practiced medicine in different parts of the world, and have been unable to make a living. They are unfit doctors. We have men coming here who are crooks, and have been driven out of their own states. Some have been found to be fugitives from justice, and yet they are employed by you or your firm. And all this is done by you either without an effort to ascertain whether the applicant is licensed, or you know that he is not and employ him in spite of the knowledge. Cast the first stone who dares.

"This bureau made a campaign against inefficient hospital work in this state. We did not go to the boards of directors and say, 'Your superintendents are incompetent'; but we showed them the conditions and let them judge for themselves. The result was that the year before the war there were fifty or sixty vacancies in the position of hospital superintendent. The 'glove was thrown down' this morning, when it was stated that licensure should be scrapped; the challenge is accepted. We are going to open a campaign. The public and your companies do not know what you are doing in the way of employing incompetent and unlicensed assistants. We are going to show the real state of affairs; and if there are vacancies in the medical departments of fifty or sixty state industrial plants in the post of head physician, blame no one but yourselves. The Bureau of Medical Education and Licensure has this industrial question at heart as much as any one else can have, and we do not purpose that men shall be employed as doctors who are not competent. I am speaking in a general way, apparently including you all, but I am only hitting at a few. I do not want to be personal, and therefore I make these statements general. You all know, however, that what I am saying is true, and that there is warrant for an active campaign against this condition. We purpose showing the industries that their interests are not being conserved; that they are paying compensation for cases that they should not because of the incompetent work on the part of the doctor, and we are going to demand that the poor man who is not able to protect himself be protected by the people in a position to do it."

THE PENNSYLVANIA STATE SOCIETY MEETING.

The Homœopathic Society of the State of Pennsylvania will meet in Philadelphia with the Chamber of Commerce as the host, on September 16, 17 and 18. Inasmuch as the Society has not met in Philadelphia for a number of years, arrangements have been made for a meeting of extraordinary interest, both in the matter of scientific papers and social entertainment. The Pennsylvania Society is the best organized of all our associations. It was accordingly deemed advisable that others be invited to participate in our success. The trustees have authorized that invitations be sent to all homœopathic physicians practicing in the southern tier of counties of New York State, and New York City and Brooklyn, and the physicians of New Jersey, Maryland and Delaware.

On the evening of September 15th, the Homœopathic Society of Germantown will hold its regular meeting. It has extended to visiting members the courtesy of the floor, and will provide for their entertainment. A lantern-slide exhibition of pathological conditions of the chest under the X-Ray will be presented by Dr. Walter C. Barker. Following this, a smoker will be given in honor of the visiting members. Tuesday, Wednesday and Thursday will be taken up with scientific sessions. The following are the entertainments proposed for the visiting ladies: Tuesday afternoon, automobile trip to Valley Forge; Tuesday evening, theater; Wednesday afternoon, garden party at Mr. Hering's residence at Abington; Wednesday evening, banquet; Thursday afternoon, inspection of the John Wanamaker stores.

Although Pennsylvania has a larger proportion of physicians members of its State Society than has any other State Society, we must do still better. Already a goodly number of physicians have applied for membership. Let each member who reads this communication search out such of his neighbors as are not members and induce them to join.

Let each physician begin now to make his plans to come and not wait until the last minute. If he neglects this precaution he will not enjoy the occasion to its fullest capacity. Anticipation always adds to the realization, especially as in this instance the realization will be good.

THE NEW YORK HOMŒOPATHIC MEDICAL COLLEGE.

It will interest every homœopathic physician to know that great things are being done by the Alumni of the New York Homœopathic Medical College and that the future of this institution is assured under the able leadership of Dean Preston.

Dr. Preston is an educator of ability as well as being a man of sterling character and a great organizer, and on his recommendation that the New York Homœopathic Medical College must have an additional $30,000 a year for the next three years and a large endowment, the Alumni of the New York Homœopathic Medical College pledged over $11,000 and an endowment of over $80,000 at their Alumni banquet, and at the meetings of The American Institute of Homœopathy the response was even greater. A number of the Alumni pledged $1,000 each year for the next three years, and still others pledged large sums for the permanent endowment.

The support of the Alumni of the New York Homœopathic Medical College is most encouraging to all other homœopathic colleges as it shows conclusively that the homœopathic physicians of this country are willing to make personal sacrifice for their Alma Mater and that they are thoroughly convinced of the necessity of maintaining our homœopathic institutions on the highest educational plane.

The Hahnemann Medical College of Philadelphia, like all other educational institutions, needs money, and the importance of the generous gift of Mr. Walter E. Hering, which will provide for educating high grade students who are unable to pay their college expenses, cannot be over-estimated. The primary object of Mr. Hering's new benefaction is the education of young men who desire to study medicine and without its assistance would be unable to realize their ambitions. To become a beneficiary under the foundation, candidates must come well recommended and must satisfy the trustees of their ability, industry and character. The necessary funds will then be advanced to them, but it must be distinctly understood that it will be advanced as a loan. In no sense is it to be a gift. When the money is paid back, it will be placed in the fund and will become available for the education of others.

Trustees of our homœopathic institutions will no doubt be greatly encouraged by the attitude of the homœopathic pro-

fession and will no doubt even more generously support our homœopathic institutions than ever before. Mr. Erwin, of our Board of Trustees, has recently pledged a thousand dollars a year for The Hahnemann Medical College and Hospital and Colonel John A. Lockwood, our recent Commanding Officer of The Hahnemann Unit of the Student's Army Training Corps, who had no previous knowledge of our institution, has appreciated the work we are doing by making a substantial provision for this institution in his will.

This is a legitimate time for optimism but more so for the active support for our homœopathic institutions and a suitable time for local homœopathic societies and classes to follow the example of the classes of 1896, 1888 and other classes in Hahnemann in providing a fund for the education of deserving high grade young men. The responsibility and duty of every homœopathic physician is self-evident and the future of our homœopathic institutions is assured by the moral and financial support of patrons of homœopathy.

Wm. A. Pearson.

Laboratory Findings During the Influenza Epidemic in an Army Tuberculosis Hospital.—Corper and Downing report the results of the clinical bacteriological and pathological work made during the influenza epidemic at Base Hospital No. 16, a hospital for the tuberculous, New Haven, Connecticut. The influenza bacillus was found in the nose and throat of 14% of normal individuals, without symptoms of influenza; in 28.5% of patients with influenza; in 24% of consumptives without influenza; and 62% of consumptives with influenza. In typical, uncomplicated cases of influenza, the bacillus was found in the sputum in 75%; and in 100% in cases with broncho-pneumonia. In the sputum of influenza patients the bacillus was commonly accompanied by some other organism, most frequently the pneumococcus (types I, II, III, or IV) or streptococcus. The bacilli can be carried for several weeks by people who have not had influenza. They are found more often in the sputum and seem to prefer the lower respiratory tract, thus differing from the ordinary acute cold organisms. Blood cultures were uniformly negative for the influenza bacillus. Leucopenia or a normal leucocyte count was the rule during the first three days of the disease, after which an occasional leucocytosis was found. Necropsy on eleven cases of influenzal broncho-pneumonia (seven of which were tuberculous) showed the influenza bacillus in the lungs in ten cases and the pneumococcus in eight. Influenza bacilli were never found in the blood at autopsy, but pneumococci were found in three of seven cases examined.—*American Review of Tuberculosis*, March, 1919.

GLEANINGS

MEDICINE

Conducted by Clarence Bartlett, M. D.

The Use of Yeast in Infectious Diseases.—In the middle of the nineteenth century, it was believed that yeast could be used with successful results in the cure of furunculosis, anthrax, and diabetes, and in the treatment of diseases of the skin, suppurative processes, diseases of the respiratory passages, and gastro-intestinal diseases. In the latter part of the nineteenth century, however, there came a reaction, and yeast was used comparatively little by the medical profession. In 1899, the therapeutic importance of yeast was again brought to the attention of physicians by the researches of Brocq.

At the present time, yeast as a therapeutic agent is again a prominent topic of interest. It is claimed by some that it can be used most successfully in treating gastrointestinal disturbances, such skin diseases as acne, furunculosis, impetigo, and carbuncle, and in surgical conditions due to pyogenic organisms. Others have reported favorably on the use of yeast against infectious diseases. Yeast is being applied to many fields of therapeutic endeavor with apparent success, which can be confirmed only by the results which time can make certain.—*Boston Medical and Surgical Journal*, May 22, 1919.

Left Scapular Pain and Tenderness in Heart Disease and Distress.—John Parkinson (*Lancet*, April 5, 1919) noticed that a considerable proportion of soldiers sent to the heart section complained of pain in the back along with pain below the left breast. He investigated this pain in the back in 100 consecutive men who came to him with the complaint of pain in the left chest. Of this series twenty-eight men also were found to have pain in the region of the angle of the left scapula. These, with twenty-two others collected later, comprise the material on which he bases his statements. The pain is always typically localized by the patient to the area just below or internal to the lower angle of the left scapula, though this pain may be found to extend up along the vertebral border of the whole lower half of the scapula, or may be associated with complaint of pain in the posterior axillary line at the level of the lower scapular angle. The scapular pain did not seem to occur in the absence of submammary pain, which is located in one or more of the fourth, fifth or sixth interspaces. In front it may also extend up to the third or the second space. Eight of the men also complained of pain or paresthesia in the left arm, as well as in the back and left side of the chest. Usually the pain in the back is of the same type as the submammary pain and it may be sharp and stabbing or dull and aching. Exertion was found to be by far the commonest exciting cause of the pain, while in a few cases the pain was also aggravated by lying on the left side. Usually the scapular pain had gradually developed after the appearance of submam-

mary pain and it had lasted for more than one year in all but eight of the men. The commonest associated symptom was shortness of breath dependent upon exertion, and this usually preceded the onset of the pain. More than a fourth of the men also had definite hyperesthesia of the skin of the lower part of the back of the left chest, always including the angle of the scapula, but often extending far beyond it. Study of these cases led to the conclusion that whatever causes pain below the left breast is also capable of causing left scapular pain, and the latter is therefore seen in myocardial and valvular diseases of the heart disorders. In twenty of the fifty cases there was a definite history of acute rheumatic fever, ten of which had valvular disease. In about half of the cases no abnormal physical signs could be found. The pain and hyperalgesia about the angle of the scapula associated with the submammary pain arises from the heart and belongs to Head's class of referred visceral pain.—*New York Medical Journal*, May 17, 1919.

Stone in the Common Duct: with Analysis of Fifty Cases.—A. Murat Willis draws attention to the following facts: (1) Stones are present in the common duct in a considerable number of patients suffering from cholelithiasis; in approximately 10 per cent. of the author's cases. (2) A certain number of patients with stone in the common duct do not present symptoms sufficiently suggestive to justify exploration of the duct, and in some of these cases, palpation will fail to disclose the presence of the stone. (3) Even exploration of the duct sometimes fails to reveal the presence of calculi, though the previous and subsequent history of these patients may indicate or prove that stones were actually present. Willis points out that the mortality in common duct cases subjected to operation is variously given at from 6 to 16 per cent. In his series, five patients died, giving a mortality of 10 per cent. In gall bladder cases, exclusive of those showing calculi in the common duct, the mortality was 2 per cent. From these figures it is evident that in cholelithiasis cases operation should be performed before the entrance or formation of the calculus in the common duct. The condition is essentially a surgical problem and medical temporizing is fraught with peril to the patient. The author gives the history of five fatal cases, from which it is seen that hemorrhage was the striking feature of all. Bleeding was the direct or strongly contributory cause of death in every instance. The most rapidly fatal hemorrhage occurred in those patients in whom, for some cause, an acute exacerbation was superimposed on a chronic jaundice. Although delay and expectant treatment are indicated in some types of abdominal infection, the author believes that this rule cannot be followed in cases of infection, with obstruction of the common duct. Acute jaundice is not so potent a factor in producing the hemorrhagic diathesis as chronic jaundice is and the author states that in the future, in common duct cases, the appearance of jaundice will be an important factor in his decision for immediate operation.—*Medical Record*, May 24, 1919.

The Prevalence of Syphilis as Found in Routine Coroner's Autopsies.—Thompson has determined that in 700 routine autopsies performed for the Coroner of St. Louis during the last six years, about two-thirds of all adult cases have shown gross lesions of syphilis. These figures, however, cannot be considered as representative of the frequency of this disease in the population at large, for the great majority of people passing through

the Coroner's office are representative of the underworld. They include gangsters, prostitutes, the poor and ignorant dwellers of the slums, many of the colored race; but, on the other hand, there are a certain number of cases of sudden death that are handled by this office which reach into some of our best families.

Warthin, in routine autopsies at Ann Arbor over a period of two years, found syphilis present in one-third of all adult cases. This series included a certain number of known treated and clinically cured syphilis; a few cases of clinically active syphilis and a large number of cases in which syphilis was denied or not suspected.

The lines observed by Thompson in his series included cardio vascular changes, disease of the liver, nervous and gastro and genito urinary tracts. Gummata were rarely found. He also referred to the rarity of lesions of the stomach but stated that three different types were noted: (a) Cases of diffuse or butterfly scarring of the pylorus. (b) What might be described as obliterative gastritis with replacement of the mucosa by fibrous tissue. (c) Syphilitic ulceration which in one case was followed by phlegmonous gastritis and death from septicemia. Lesions of the intestines and kidneys were rare. In the lungs only three cases which were typically syphilitic were found. Aortitis and diseases of the heart and blood vessels seem to be the most important factors in the destruction of life.—*American Journal of Syphilis*, April, 1919.

Syphilis in Senility.—Wile reports a case of primary infection in a man 79 years of age. The manifestations were delayed until the fourth month and then were of a particularly severe character. Nevertheless, hospital treatment with arsphenaminæ was efficient. The author calls attention to the unusual delay in manifestation of activity and occurrence of glaucoma due to specific iritis and the associated early nervous involvement without apparent clinical symptoms but with positive spinal Wassermann.—*American Journal of Syphilis*, April, 1919.

A Proving of Spartein Sulphate.—Hinsdale has experimented with this drug upon the human subject, and to this extent is the pioneer investigator. The results of his experiments made with one and two grain doses show that with regularity, the drug produces a decided increase in the urinary quantity without, however, any other renal disturbance, or any change in the urinary composition, the specific gravity being scarcely influenced. Both systolic and diastolic blood pressures were reduced, the former to an average of 11 mm., and the latter by 17 mm. The larger doses produced the greater falls. In the pulse rate there was an average reduction of 10 beats per minute. The sphygmograph showed no peculiarities other than those incidental to lowered blood pressure. In summarizing, Hinsdale, remarks: "Spartein sulphate depresses the heart by poisonous action exerted on the myocardium, and that this, with the stimulating action upon the vagus, accounts for the lowered blood pressure and reduced pulse rate. It is not a cardiac stimulant; at least nothing in our experiments would warrant this conclusion. In fact the opposite is the effect."

The drug may be used palliatively or curatively. It would seem to be an addition to lower hypertension. According to the author it will palliate arterio-sclerotic cases. The dose usually prescribed for physiological action is altogether too small. The majority of physicians have contented them-

selves with the administration of fractional of a grain doses. The probabilities are that 2 grains would be the most efficient dose. Spartein may also be used as a diuretic in connection with cardiac disease. It is not in any sense a substitute for digitalis.

Homœopathically, it is hard to give the drug a place if we use a special designation to indicate the diseased condition. Hinsdale suggests that it might be indicated in cases of exhaustion with slow pulse and low pressure following acute disease. Such a condition seldom requires much medication, as time alone will cure without other remedies. In actual practice, we meet with a large number of obstinate cases presenting a variety of symptoms, among which are slow pulse, low blood pressure, and diuresis. Here we would offer the suggestion that spartein be given a trial in doses of 1-50 of a grain at four hour intervals.—*Pacific Coast Journal of Homœopathy*, March, 1919.

Syphilitic Peritonitis.—Letulle (*Paris Presse medicale*) remarks that: "Syphilis attacks the peritoneum much more frequently than is imagined. Neither is there any ambiguity about the nature of the lesions produced, for these are quite characteristic. Hepatic cirrhosis is very common in hospital practice among both sexes and many of these patients have a positive Wassermann, or, in other words, the two affections have a tendency to associate themselves together. The author has tested 154 subjects with hepatic cirrhosis and has obtained 74 positive reactions. That is to say, every other cirrhotic is a syphilitic. Not all clinicians accept this kind of proof. The author has now for years subjected these patients to an intensive intravenous mercurial treatment—which as a rule is very well supported—along with large and increasing doses of iodide and various arsenicals. At times the results are surprisingly good, as in a case of clinical cure in a year's time of a case of syphilitic cirrhosis of the liver and syphilitic aortitis. Unfortunately these subjects when they reach the hospital are apt to be all in physically and moreover suffering from high degrees of ascites. They can no longer tolerate an intensive cure and are, moreover, demoralized, failing to keep up treatment and tending to run after their favorite alcoholic drink. The per cent. of good results in these advanced alcoholic cirrhotics is very small. From a different angle, cirrhosis of the liver is an affection known to end not infrequently in spontaneous cure. Syphilis is known to play a decisive role in the ascites component so that in all ascites we must never fail to suspect syphilis and make a thorough investigation to find or exclude it. The presence of an alcoholic or tuberculous component should not by any means exclude the likelihood of syphilis. Since a Wassermann negative has a questionable significance, every case of cirrhosis ought to be submitted to an intensive anti-syphilitic cure.—*The American Journal of Syphilis*, January, 1919.

Tic Douloureux with Special Reference to Treatment by Alcohol Injections.—(E. R. Faulkner, *Laryngoscope*, Vol. XXIX, No. 3.) This writer reports his experiences with twenty-four cases, fourteen of which were successfully injected, including one injection of the Gasserian Ganglion. He lays stress upon the necessity of injecting the nerve in order to obtain more lasting effect. He uses a special needle three inches in length and one millimeter in diameter with an abruptly bevelled end and armed with a small stylet which is withdrawn when the nerve is reached. Four or five drops

of a two per cent. solution of cocaine are injected and the stylet replaced in order to hold the needle in situ. If the needle has successfully reached the nerve there is a feeling of numbness and loss of sensation over the area of distribution. If anaesthesia is not obtained he makes a further attempt and if unsuccessful desists for twenty-four hours. If successful the stylet is withdrawn and eight to ten minims of 85 per cent. alcohol are injected.

To reach the second division of the nerve the needle is inserted just below the angle formed by the zygomatic arch with the malar bone and pushed upward and backward through the pterygo-maxillary fissure to the foramen rotundum. For the third division, the needle is inserted on a level with the incisura notch, ¾ of an inch in front of the tragus with an inclination of the needle upward to the foramen ovalæ. To inject the ganglion the needle is inserted opposite the second molar tooth of the upper jaw and directed upward and inward.

Of the fourteen cases recorded as successful ten have been free of pain as follows: one free for four years; two for three years; one for two years; one, one and one-half years; two, one year; one, six months, and one, one month. Four cases have had relapses. One case was re-injected successfully at once. One had a return in another division of the nerve and had that successfully injected. One has had slight warnings and one had has severe paroxysms.

The complications experienced have been slight hematoma after injecting the second division; paralysis of the sixth nerve in one case cleared up in a few weeks. The ganglion case developed severe keratitis six weeks after the injection; recovered in six months with opacity of the cornea.

DERMATOLOGY

Conducted by Ralph Bernstein, M. D.

Hereditary Angiomata (Telangiectases) with Epistaxis.—S. N. Paul has added another large family group to the already long list of families suffering from this condition. Steiner reviewed the literature last year, and in the family history of the group contributed by him the disease could be traced back as far as the great-grandmother and both her daughters; that is, the grandmother of the present patient and her sister suffered from the disease. The latter, who died of anemia, had 5 sons and 2 daughters. Three of the sons were affected and 1 died from anemia. The grandmother of the patient had a family of 8 children; 5 sons, 3 of whom were affected, and 3 daughters, 2 of whom were affected. Of the latter, one, the mother of the patient, died of anemia, and of her family of 7 sons and 2 daughters, 6 of the sons and both of the daughters suffered from the disease.

The patient was a healthy woman 32 years of age. She stated that during childhood she suffered from frequent nosebleed, which was the first indication of the disease. This continued recurrently, and about adult life angiomata appeared which increased in size and number as the patient grew older. Bright red angiomatous lesions were scattered over the patient's face, approximately a dozen on each side, while a few were located over the forehead, chin and nose. They varied in size from pin point to millet seed, the former being in the majority. There was involvement of the mucous membranes of the lips, but the buccal mucous membrane and the fauces

were free. Numerous angiomata were distributed over the trunk and there was one in the center 5 mm. in diameter, this being the largest lesion on either the mucous or cutaneous surfaces. Telangiectases were found on the hard palate as well as on the conjunctival surfaces of the eyelids. There was also an angioma on the nasal mucous membrane which had been destroyed by radium. Telangiectases were also to be found upon the palmar surface of the left hand, and a few on the dorsal surfaces of the fingers of the same hand. Anemia was not suggested by the appearance of the patient and this opinion was confirmed by a blood test. The patient's mentality did not appear dulled or deficient, and there was no tendency to hemophilia.—*Prac. Med. Series.*

Angiokeratoma and Multiple Telangiectases.—Adamson, referring to a case exhibited before the Dermatologic Section of the British Medical Society in London, which created quite a discussion from a diagnostic standpoint as to whether it was a picture of multiple telangiectases or multiple purpuric lesions, says it does not belong to either group but that it is one of angiokeratoma.

A microscopic section showed that the blood cysts are actually in the epidermis, and all observers are united in the belief that this is the result of dilatation of the capillaries of the papillæ which upon extending into the epidermis are cut off by lateral down-growth of the intra-capillary processes. Sooner or later, many of these blood cysts are entirely cut off from the derma, and this accounts for the inability at times to express their contents, which is the reason why they simulate purpuric lesions. Occasionally the contents of these cysts become converted into granular detritus, and they may come to the surface and become exfoliated. These angioma are known as "nevus araneus" and are round and sharply defined in contrast to the tuft or spider-like type.—*Brit. Jour. Dermatol. and Syph., April-June, 1918.*

Acanthosis Nigricans Following Decapsulation of the Kidneys.—The pathogenesis of this infrequent disease and the causal factors thereof being obscure, the case reported by Fred Wise is unusually interesting.

The patient in question was a young woman 25 years old, who had attempted suicide by swallowing mercuric chloride. Upon recovery she was induced to submit to decapsulation of the kidney. This operation was successfully performed and the patient experienced no further trouble until the next year. At this time an itching dermatitis, general in character, made its appearance and the patient again came to the hospital. For a period of two weeks this acute inflammatory dermatitis persisted, after which time the symptoms began to gradually subside, and the patient's skin again returned to normal condition. In the course of a few weeks the skin took on a yellowish-brown tint, being more noticeable on the neck and in the axilla and groin. This discoloration progressed slowly and generally until the entire body surface, except the hands and face, was involved. The fine lines of the skin all over the body became more distinct; the palms and soles became harsh and dry, and in the axilla and groins brown, warty growths evidenced themselves, simultaneous with the pigmentary change. In the axilla and groins were found masses of warty excrescences. These lay in parallel rows and were of pin-head to lentil sized. They varied in color from brown to black and were closely aggregated, soft to the touch, and of a velvety consistence These parts were devoid of hair. The pigmentation and quad-

rillation was so slight on the backs of the hands, legs and thighs as to be hardly noticeable. The muco-cutaneous borders and the visible mucosae were not affected.

In addition to the foregoing described changes there was present on the skin of the upper arms and back quite a number of scattered soft, edematous, glistening papules. These were about the size of lentils and were somewhat raised above the surrounding skin, with soft, smooth and comparatively depigmented surfaces.

Acanthosis nigricans is of two forms—a benign form which occurs in children and adolescents, which does not disturb their general health and in which there appear no visceral tumors or morbid growths; and a malignant form occurring in adults commonly associated with cancer of the abdominal organs or elsewhere. The dystrophies of the skin in the juvenile type are mild in nature and the dermatoses may remain unchanged over a period of years. The reverse is true of the adult type as variations in the severity and extent of the cutaneous dystrophies occur. The adults affected with this disease usually succumb within one or two years to the associated malignant disease. In the juvenile cases the cutaneous affection does not seem to exert any particular evil effect on the sufferers from the disease.

With respect to the etiology of adult cases, the mechanico-nervous theory of Darier is the most tenable, viz., that the cutaneous dystrophies are secondary to functional derangements of the abdominal sympathetic induced by neoplasms of the abdominal viscera and by their metastatic growth.

As for the juvenile cases and those occurring in young adults, we have the theory offered by Darier and Jacquet, that the presence of congenital malformations, benign growths, or peritoneal adhesions which in some manner interfere with the functions of the abdominal sympathetic system, causes the cutaneous manifestations which are peculiar to this disease.—*Jour. Cutan. Dis.*

Lymphangioma Circumscriptum.—This is a rare cutaneous affection first described by Tilbury Fox. The clinical signs are more or less definite, and the most frequent occurrence of the disease being in early life is suggestive of a hereditary tendency. In the following case, described by S. N. Paul, the 12 year old girl stated that the condition had been present since early childhood. The lesion was approximately 6 cm. long and 9 cm. wide, and was located on the inner surface of the left thigh. Thick, deep-seated, frog-spawn-like vesicles, the largest being hempseed size, were scattered over this area. The largest were somewhat opalescent and the smaller were just visible above the surface. Some of the vesicles showed telangiectasis in the form of dots and striæ, while others were blackish in color due to the extravasated blood from the dilated vessels. External hemorrhage quickly took place when these were scratched or upon the application of friction. The eruption was worse at times and varied in appearance. When the case was reported the patient was undergoing radium treatment and good results therefrom were expected.—*Med. Jour. Austral.*

Lymphadenosis Cutis Universalis.—Fred Wise describes two forms of this disease, namely, the diffuse or universal and the circumscribed, representing two different clinical types which Arndt says do not merge into each. The latter or circumscribed form is the far more common of the two forms,

but both may be associated with the different blood pictures known as leukemic, subleukemic and aleukemic.

The case here reported is an example of the aleukemic type and is both peculiar and unique in that the patient's skin presented both types together, while there existed an almost universal atrophodermia which was associated with areas of deep reticulated deposits in the skin and glands, and because there were large and small infiltrations, nodules and tumors and ulcerated areas of skin.

This patient had come under the observation of many dermatologists during the past three and a half years, and a number of them without hesitation pronounced the cutaneous picture here presented to be unique in their experience.

The case has naturally given rise to much discussion from a diagnostic viewpoint. Its original presentation was before the Section on Dermatology of the New York Academy of Medicine as a case of pityriasis rubra pilaris; some diagnosed it as pityriasis rubra of Hebra; others as mycosis fungoides, leukemia and pseudoleukemia cutis, lymphodermia perniciosa, and idiopathic atrophy of the skin. Arndt, after examining the patient, would not voice a definite opinion, but suggested that a microscopic study of some of the enlarged glands might give rise to the identification of the malady, and might perhaps throw some light on its pathogenesis. Numerous sections taken from the skin and glands were microscopically studied, as well as alterations in the blood pictures, and the conclusion has been reached that the malady was an example of lymphadenosis having associated with it erythrodermia, generalized atrophodermia, disseminated pigmentation, tumor formation and ulceration.

The patient's blood counts are normal, he is well nourished and his general health is fair. His skin condition commenced ten years ago and has become universal. The disease is characterized by reddening, edema and tumefaction; the formation of moist eczematous patches, the presence of nodules, indolent ulcers, soft tumors and tumefied masses; widespread pigmentation, almost universal atrophy of the integument accompanied by a nearly complete alopecia of the scalp and face. The subjective symptoms are moderate pruritus and pain in the ulcerated parts of the body.—*Jour. Cutan. Dis.*

GYNECOLOGY AND OBSTETRICS

Conducted by T. J. Gramm, M. D.

Purgation of Patients Before Operation.—From a clinical and experimental study of the question whether the purgation of patients before operation is justifiable, Alvarez (*San Francisco*) has found a number of reasons for avoiding purgation before operation. Among them are: that the dehydration of the body and the upset in salt balance are bad, particularly before an operation in which there may be hemorrhage and vomiting. From magnesium sulphate there may be an increased amount of fluid in the bowel to disturb those who want it empty. In operations on the colon, liquid contents are harder to control mechanically than are solid masses. After purgation there is an increased growth of bacteria. Some evidence exists that there is an increased absorption of toxins, and a greater permeability of the mucous membrane to bacteria. Undigested food may be carried down into the colon

to supply increased pabulum for the bacteria. Whether from disturbances in motility, in absorption, in the circulation, or in the bacterial conditions, there certainly is a tendency to flatulence and distention. When the bowels must move frequently during the night, the loss of sleep is considerable. Purgation makes the bowels react so poorly to drugs that there may be grave difficulties in meeting post-operative emergencies. Emptying the bowel by starvation and purging makes the resumption of colonic activity much more difficult. The colon must be filled and distended to a certain extent before it will empty. The fact that patients sometimes begin to vomit during the night before the operation, shows that the purge must be responsible for some of the post-operative nausea and vomiting. The ether adds the finishing touches to what was begun the night before. It is suggested that food be given as late as possible before operation; that even enemas be avoided if not absolutely necessary; that water and solid food be given by mouth as soon after operation as possible; and that purgatives be avoided after operation as well as before.—*Surg., Gyn. & Obs.*, Vol. XXVI, 651.

The Treatment of Surgical Shock.—Rishmiller says the remedies employed are adrenal inchloride, pituitrin, blood transfusion, hypodermoclysis, enteroclysis, intravenous saline, and morphine. The blood pressure should be taken in every case. Local anæsthesia, by blocking nerves, has a tendency to prevent shock. Sensory nerve irritation of sufficient force to produce vasomotor exhaustion causes nerve paralysis. Children and the aged are very susceptible to shock. Hemorrhage, especially venous, is the principal cause of shock. There are two distinct varities of shock: prostration with indifference and prostration with excitement. Peritoneal absorption of septic material causes death through shock before peritonitis can develop. Subnormal temperature, irregular pulse, superficial respiration, cold anæmic extremities and clammy perspiration, contraindicate operation. The severity of operative shock depends on the length of operation and the degree of anæsthesia.—Abstract Surg.—*Surg., Obs. & Gyn.*, Vol. XXVI, p. 538.

Pituitrin in Post-Operative Treatment.—Davis and Owen say the gas-pain problem has been solved by the use of pituitrin hypodermically. Their method is as follows: the administration of morphine, gr. 1-6, and atrophine, gr. 1-180, hypodermically one hour before operation. Immediately after operation, the administration of one ccm. of pituitrin hypodermically. This same dose is repeated in two hours; two hours later ½ ccm. and four hours later another ½ ccm. Where too much handling of the viscera has not occurred, no more pituitrin is given; but in severe operations, doses of ½ ccm. are continued every four hours until twenty-four hours following operation. Twenty-four hours after operation 3 grs. of calomel in ½ gr. doses are given every half hour, followed by a saline cathartic.

From 126 cases the conclusions are drawn: (1) Pituitrin is a valuable drug in stimulating the muscular coat of the intestine after abdominal section in non-septic cases. (2) It is of decided aid in preventing post-operative shock in non-septic cases of abdominal section as evidenced by lack of rise of temperature or pulse rate. (3) It does not appear to have any influence in cases complicated with septic peritonitis. (4) It stimulates the secretory activity of the kidneys in eclampsia. (5) It materially reduces the post-operative suffering.—*Abstr. Surg., Gyn. & Obs.*, Vol. XXVII, 1, p. 18.

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SYPHILIS.

A SYMPOSIUM READ BEFORE THE HOMOEOPATHIC MEDICAL SOCIETY OF GERMANTOWN, MAY 19, 1919.

INTRODUCTION.

BY

L. T. ASHCRAFT, M.D., F.A.C.S.

I HAVE been asked to make the opening remarks at this Symposium on Syphilis. Because others are to follow me and take up the subject from the standpoint of their specialties, I shall speak of the disease in a general way only.

Syphilis may be defined as an infectious disease transmitted from one individual to another through contact or heredity. It is distinctly chronic in its course, and of variable duration, displaying from time to time, symptoms that may involve any one or several different parts or organs of the body. The syphilitic process is essentially a granuloma, having its origin in the perivascular lymph spaces.

According to severity, the cases may be classified into five groups:

(1) Mild cases, presenting merely a chancre and a slight rash, with apparently no symptoms affecting other organs and tissues of the body. Such cases are rare.

(2) Those with these symptoms plus lesions of the mucous membranes, the hair, the nails, and the skin.

(3) Those with severe, destructive skin lesions and gummatous involvement.

(4) Very malignant, rapidly destructive cases, attacking, perhaps, all tissue. These, too, are rarely seen.

(5) Parasyphilids.

Cases belonging to classes 2 and 3 are the kind usually met with, and these are distinctly amenable to treatment.

The discovery of the organism of the disease, the spirocheta pallida, has made it possible to make an accurate diagnosis in cases that might otherwise have escaped detection; and the perfection of the Wassermann technique has only accentuated our diagnostic resources.

Treatment should be commenced just as soon as the diagnosis is made, and should be continued constantly for a period of at least three years. After this the spirochetes lose their virulence. No one can tell what course a case may pursue, for even a very mild commencement may be followed by severe tertiary lesions. Therefore, the sooner the treatment is begun and the more faithfully it is persisted in, the better will be the result accomplished.

The internist, when such a course is universally followed, will meet with fewer involvements of the liver, heart or aorta; the neurologist, with fewer cases of tabes or paresis, and the various other specialists with less of the pathology relating to the organs of special sense. There will be fewer maimed children, and fewer inmates of our almshouses.

Syphilis is a very manageable disease, except in a small proportion of cases, such as the rare type called galloping syphilis, described by the French, and in cases with severe nervous manifestations. The ideal treatment is, of course, preventive. This means that within one hour after exposure, a salve containing lanolin, forty grains, and mercury, twenty grains, must be rubbed into the parts. The prognosis, however, depends to a large extent upon the soil in which these micro-organisms are implanted—upon the habits of the individual, as well as upon his surroundings. The stronger his constitution, the less is the effect made upon it by the ravages of the disease. Syphilis is a condition that maims, but rarely kills. The statistics of life insurance companies show that only about 15 per cent. of persons with this disease die as the result of the infection. It is, however, computed that the expectancy of life is reduced about five years because of it.

Coming, now, to the details of the treatment, it may be said, in the first place, that a good deal may be done for these

patients by a strictly hygienic life, the avoidance of an excess of alcohol, the taking of plenty of rest and good food, and abstinence from the use of tobacco. The last is mentioned, not because tobacco is in itself harmful, but because the chewing of the ends of cigars or of loose tobacco is often responsible for the persistence of mucous patches, buccal lesions constituting a notorious cause of syphilitic infection.

Concerning the medical treatment of syphilis, our ideas have undergone a considerable change during the last few years and, I think, during the last few months are changing again. Salvarsan, neosalvarsan and their substitutes have had the preference, but quite recently, the pendulum has again swung the other way to a considerable extent, a good deal of skepticism having entered the minds not only of the medical profession, but also of the laity, regarding the value of these drugs. It may be that its substitutes are not so powerful as salvarsan, or it may be that they have been improperly used. There is no doubt that the profession is somewhat disappointed with the drug and its substitutes, and I have had patients say to me that they had six or eight injections without being cured, and ask whether the remedy was as effectual as it was supposed to be. Undeniably, however, it is a great remedy. If we can impress upon the layman the fact that a cure can be accomplished only by persistent treatment we shall have done much towards the proper management of these cases.

As before stated, the use of salvarsan has pushed mercury somewhat to the wall, and has almost entirely relegated potassium iodide to the shelf. Mercury, however, is a most valuable remedy. It was our sheet anchor in the treatment of syphilis long before salvarsan was thought of. I have had patients who were seriously ill, respond favorably to the intelligent use of mercury. This drug is a tonic, increasing the number of red blood-corpuscles. It also promotes the elimination of urea, and constitutes a perfect similimum for syphilis; and I predict that we shall be more and more turned towards the use of this drug as our main stay in the treatment of this disease, giving salvarsan only as we used to give iodide of potassium—as the knock-out blow. The knowledge of how to use mercury makes it an ideal remedy.

As for iodide of potassium, it is a remedy that has stood me in good stead many times. Some claim that this drug did

formerly just what salvarsan does at the present time. It is an excellent remedy for gummatous lesions anywhere, breaking down the barriers, and giving mercury a chance to act.

Salvarsan, however, is, in a sense, an ideal remedy. It is distinctly parasiticidal, and will control the active lesions; although it has a tendency to reduce the patient's resistance to the inroads of the spirochetes. It must, however, be given many times, and always augmented by a consistent course of mercury. As an evidence of the dissatisfaction of the medical profession with the present-day treatment of syphilis with salvarsan, I may state that a substitute for it has been in use recently at the Naval Hospital, in Philadelphia, the results of the treatment being very promising. This drug is known as arsenovan, a combination of dimethylarsenin, mercury biniodide and sodium iodide, which is claimed to be comparatively nontoxic, and to permit of giving the injections in a course of six or more at intervals of from four to six days.

To be specific as regards the treatment of syphilis, in the *primary* stage it is my custom to give salvarsan or a substitute by intravenous injections once a week until six doses have been given. The Wassermann control is then usually negative. If not, two more injections will usually produce a negative result. Following this, mercury is given for a year, the dose of the biniodide being between one-quarter to one-sixth of a grain. The Wassermann test should be made every six months for a period of three years. This is all that is necessary in order to effect a cure in most cases of primary syphilis.

In secondary stage infection, however, we cannot look for such happy results to occur quite so promptly. Sometimes two courses of salvarsan have to be given during each year, always to be supplemented by the administration of mercury. One must be governed by the results of the Wassermann test and by the clinical signs. During the first year, I try to content myself with six injections of salvarsan plus mercury given every third day for a period of six months. I then give the patient a month's rest, at the end of this time commencing again with mercury. If the Wassermann is still positive or the symptoms persist, I give another course of salvarsan during this same year, administering as many doses as may be necessary. During the second year, I give six doses of salvarsan, in direct order weekly, with a third course of mercury

throughout the year. During the third year, the mercury is continued, and several doses of salvarsan may be given. The Wassermann test control is made every four or five months. In severe tertiary lesions, or when the lesions are very destructive, a little more intensive treatment with both iodide of potassium and mercury is required. As a rule, however, I do not like to give more than twelve or fourteen doses of salvarsan within twelve months, or more than eight doses of salvarsan at any one course.

There are certain cases in which salvarsan will not succeed in making the Wassermann reaction negative and will not control the clinical symptoms of the disease. I have seen lesions that refused to disappear under the use of salvarsan, and the Wassermann was persistently four plus positive. In such circumstances, it is best to discontinue the use of that drug and substitute iodide of potassium and mercury in liberal doses. It is necessary to remember always in these cases the value of hygienic treatment, as previously referred to.

There are several methods of administering mercury. It may be applied in the form of an inunction, given by mouth or injected hypodermically. The inunction I consider unscientific and uncleanly. It is apt to product dermatitis, and the dose received cannot be gauged with accuracy; but the aim is to give half a dram to a dram of blue ointment, at one sitting, using it until the symptoms are controlled. I object, also, to the administration of the drug by mouth, except in selected cases, because of its slow and uncertain effect; although if one wishes to ascertain the tonic dose such may be best determined by this method. I much prefer the hypodermic injection, on account of the accuracy of the doses. I usually give the soluble preparation, using the biniodide of mercury in a dose of one-sixth of grain, injected directly into the belly of the gluteal muscle, rather than subcutaneously. These injections are sometimes given daily, sometimes every other day, and sometimes twice a week, according to the nature of the individual cases. We must always be on the *qui vive* for the appearance of intestinal symptoms and mild salivation. Should these occur, the injections must be discontinued. My reason for preferring the soluble preparation to the insoluble is because the latter has accumulative effect, and one is apt to get an acute toxic condition at any time. Both the insoluble and the soluble preparation are likely to be followed rarely by

large painful nodules at the site of injection in the muscles. In such an event, one must discontinue this method of administration and give the mercury by mouth, or by inunction; otherwise, sloughing may result.

No reference has yet been made to the technique of the administration of salvarsan. There are very few contra-indications to its use. Marked nephritis is one, and it is my custom to examine the urine for the presence of albumin and casts and to determine the percentage of urea. In many instances, also, I take the renal function; and if a diminution in the functional activity of the kidneys is found, I usually reduce the dose of salvarsan by one-half or one-third. Commonly, however, I give 160 c.c. of the solution. I prefer the less concentrated dose, and take from eight to ten minutes in the intravenous injection, insisting that the patient receive the injection on an empty stomach and an unloaded bowel. After the procedure, he is allowed to rest for two or three hours, no solid food being taken by him for the remainder of the day.

I have seen very little untoward effect from the use of salvarsan, and, fortunately, up to the present, after having made many injections, I have not had a single fatal result, although I have seen some such cases recorded. I have, however, had some pronounced reactions following the injections, manifesting themselves in vomiting, some collapse, a rise of temperature, and a slight diminution in the excretion of urine. The arsenical preparations are supposed to have a distinctly deleterious effect upon the auditory and optic nerves, but I have never seen such a result. Indeed, one of my patients, who had received fourteen injections of salvarsan, afterwards applied for a commission in the Army Aviation Corps, and succeeding in passing the Barany tests.

In addition to the general treatment for the syphilitic infection, the various local lesions in different parts of the body rarely call for any special consideration. The local lesions of the mouth, however, as previously mentioned, necessitate especial attention to the hygiene of the buccal cavity. Changes in the liver, heart and arteries need special treatment by the internist. Hereditary syphilis belongs to the domain of the pediatrist. Lesions of the organs of special sense should be referred to the specialists in these lines. Cases of syphilis of the nervous system belong to the domain of the neurologist, and should be referred to him. They constitute but a small

proportion of the cases of syphilis; and if energetic treatment were given them in their incipiency, we should see even fewer of them. Concerning their treatment by means of the Swift-Ellis method, the neurologists are divided. Whole pages have been written in support of its advisability and efficacy, while as much has been said condemning it. Time will tell which contention is correct.

Upon the shoulders of the genito-urinary specialist, however, rests the burden of responsibility in the majority of the cases of this disease; since he is the one who is usually first consulted, or to whom the cases are referred for diagnosis and treatment. He should be insistent that the patients submit to an examination at least once or twice a month after the courses of salvarsan and mercury are over. Many will want to stop treatment as soon as the rash has disappeared, but the treatment should be continued until several Wassermann tests have proved negative. Before permitting a patient to contemplate matrimony, one or more provocative injections of salvarsan should be given. The urine and blood should be examined, and the blood pressure determined, at regular intervals. Some insist on a spinal fluid examination for all patients. The advisability of this method is still *sub judice*.

For the poor patients who are not able to cope with the disease, special wards in hospitals have been equipped, and special dispensaries opened. This is one of the good results of the war against the venereal peril that is being carried on at the present time. Other measures that are being adopted are the suppression of prostitution and the education of the lay public with reference to syphilis and other venereal diseases.

In conclusion I would say, that although the Wassermann is at times a great help diagnostically and prognostically, yet it should not be the determining factor in treatment. Many patients with positive Wassermann are in fair health; and some with negative reactions, require a great deal of treatment.

The second paper was one entitled, "Acute Syphilis," by Dr. William C. Hunsicker. It was presented extemporaneously, as follows:

ACUTE SYPHILIS.

BY
WILLIAM C. HUNSICKER, M.D.

"Acute Syphilis" has been assigned to me. As syphilis is a chronic disease, I presume that it was meant that I should talk of its early manifestations. My plan is to outline the symptoms and treatment of the first and second stages of the disease.

One thing to remember is that syphilis is an infectious disease, primarily of venereal origin. It is a disease of the tissues and not of the blood, the spirochete appearing numerously in the blood stream only once, just before a general outbreak asserts itself. The organism then passes through the vessel wall, and lies outside the capillaries producing the so-called secondary outbreak. There are no periods in syphilis. There are merely stages, so-called for convenience.

The primary stage is that of the chancre, the initial lesion, which appears at the point of entrance of the virus. It may be either single or multiple, as is the case when there are one or more points of entrance. When it is typical, it is easily diagnosed, requiring no laboratory examinations to prove its specific character. The typical Hunterian chancre is conclusive. Unfortunately, we often find the lesion a typical, multiple, herpetiform or chancroidal in type.

In these doubtful cases, scrapings of the lesions should be taken, and examinations made for the spirochetes under dark-field illumination. Sometimes you have to make many examinations before the spirochete can be demonstrated; because the organism is found in colonies, and you may not, in making your scraping, have broken into one of these. You must repeat the scrapings until you break into a colony.

The chancre appears about three weeks after inoculation. Shortly after this, we have the adenopathy manifesting itself. This appears first in the lymphatic glands adjacent to the lesion. It is bilateral, non-suppurating and non-painful. It is not a constant state, although you will see this inferred in the textbooks. Following this nearby adenopathy, we have a general adenopathy manifesting itself. This is of the same character as the former.

About five weeks after the appearance of the chancre, we

frequently have a febrile condition developing. The patient feels badly and has rheumatic pains in various parts of the body. This condition has frequently been taken for the prodromes of typhoid fever. I have seen many cases, diagnosed as a probable commencing of a typhoidal state, clear up when the rash manifested itself.

When the general outbreak of syphilis occurs, the spirochetes leave the blood stream, going through the vessel walls, and reaching their ultimate home in the tissues of the body. At this time, the rheumatic condition disappears. Then appears the moist papular syphilide, which is the most dangerous lesion from the standpoint of transmitting infection of syphilis, and is the most persistent and constant feature of the early stages of that disease; that is, within the first two years. You want to remember that the skin manifestation, the rash of syphilis, the types of which, I presume, will be taken up more fully by Dr. Gramm, may not put in its appearance. The first manifestation may be in the eye or in any other part of the body. The case may skip the so-called secondary outbreak, and go on to a true tertiary lesion. I have seen a gummatous degeneration appear within a few months after the chancre, so we have no distinct periods.

The diagnosis of early syphilis is, of course, made by the clinical manifestations plus the finding of the spirochete in the initial lesion and the positive Wassermann reaction. The latter is not of value until the third week after the appearance of the chancre. The treatment of the initial lesion is simple, requiring only cleanliness and mild stimulation.

The general treatment of syphilis resolves itself into a combination of arseno-benzol and mercury. There is no question about that in my judgment. Arseno-benzol alone, I am confident, will not cure syphilis. It must be combined with mercury; because, after all, mercury is the real curative remedy in this disease. Arseno-benzol, however, puts the patient in a condition in which mercury can act effectively. In my judgment (I differ with Dr. Ashcraft), this takes the place of the inunctions that we used to employ in order to gain rapid control of the syphilitic process. It also takes the place of iodide of potassium. Rarely have I failed to see arseno-benzol bring about a disappearance of symptoms in early syphilis. In late syphilis, I will not be so enthusiastic about the remedy;

but in early syphilis, I have rarely seen it fail to produce a favorable result.

Our treatment of early syphilis at Hahnemann has been as follows: As soon as the diagnosis has been made, we have administered the maximum dose of arseno-benzol, either old or new. We have used salvarsan when we could get it, but we now employ this substitute. I prefer the French preparation. This is immediately followed by the administration of mercury by mouth. Why? I give it by mouth because I feel that every individual's dose of mercury is different; that you have to determine the individual tolerance to mercury before you can get a result. If you give it in any other way, you cannot gauge the dose accurately. If you give a dram of blue ointment, it may be enough for A, half enough for B, and a great deal too much for C. We gradually increase the dose by mouth until the patient manifests the beginning of physiological action of the drug. We then cut the dose one-half, and carry this amount through as the tonic or homœopathic dose for this individual. We give mercury by mouth for three months, and then give another full strength injection of arseno-benzol; then give mercury for another three months, and then take a Wassermann. If this test is negative, we do not continue the arseno-benzol, but give mercury for another three months. If the Wasserman is then again negative, we do not repeat the arseno-benzol; but we may or may not give the mercury for still another three months and insist on the patient reporting several times each year thereafter for blood observation.

One thing I wish to impress on you is that in my opinion syphilis is a self-limiting disease. It must be. If it were not, there would be an endless chain of syphilitics, the country over; because how many continue the treatment as long as is necessary? If they discontinue treatment and if the condition does not limit itself, where does the endless chain of infection stop? In Hahnemann, we have seen an overage of fifteen new cases a month for the period of twenty years. They seldom continue treatment until cured. What becomes of them? Where do they go? If they develop paresis or late skin lesions, our institutions should have so many paretics that for a number of generations the institutions would not have sufficient room to hold them all and our skin clinics would be

overcrowded. Syphilis, therefore, in my opinion, is to a degree a self-limiting disease.

The third paper in the symposium was entitled, "Cutaneous Syphilis," and was presented by Dr. Edward M. Gramm. It was as follows:

CUTANEOUS SYPHILIS.

BY

EDWARD M. GRAMM, M.D.

The skin of a goodly proportion of syphilitics show various eruptions. The time allotted for a discussion of the skin manifestations of lues is too brief to enter into a consideration of the theories to account for their production.

No diagnosis that an eruption is a syphilide should be made unless positive confirmation can be obtained from the prodromata and the collateral evidences that will be presented by others to-night; nor should syphilis be excluded on the statement of a patient that he has not suffered from the disease.

Women are much less apt to manifest skin involvement both in the early and late stages; and a pertinent inquiry is whether that fact is not due to the greater care the average woman gives her skin than does the average man; also whether the better habits and mode of living of women than of men has not much to do with their relative freedom from syphilodermata.

The probable average time of appearance of the first eruption is about six weeks after the appearance of the chancre, although a longer time is not unusual. It usually is of a hyperaemic type and is apt to be developed by a hot bath or is noticed after one. Often it is best seen when the skin is a little chilled by exposure to the air, as it is in greatest abundance on covered parts.

An outstanding fact is that the manifestations of syphilis upon the skin may stimulate almost every known skin disease with the exception of the exanthemata. However, in the early months the color of the eruption is decidedly helpful in making a differential diagnosis. The best characterization of that color is that it is of a disappearing inflammatory

lesion, rather than that of an actively inflammatory one—a dull red, rather than a bright red, The classical designation of it is as a coppery-red is well known, but it is not always just that shade. Early eruptions are likely to be generalized and symmetrical, later ones more grouped and asymmetrical, often circinate.

Subjective sensations usually are absent or very moderate, although the colored race generally complains of some itching. If subjective sensations are present they are a slight itching, while the sensation produced during the appearing stage of non-syphilitic eruptions is of a burning character, rather than an itching; itching in the latter cases being an evidence that the acme of the process has been reached or that it has entered upon the declining stage.

With the early eruptions there is falling out of the hair that is a general thinning and its existence helps in settling their syphilitic character. Late in the disease the alopecia that occurs is patchy and gives the scalp a mottled, mangy, moth-eaten appearance. It is well to bear in mind that the hair generally comes in again, so that denial of partial baldness having occurred will not act as a misleading factor during the examination of a patient.

The characteristic syphilitic odor of certain individuals must not be overlooked. It is not confined to the regions where sweating occurs most profusely, but seems to be general and not dependent upon necrotic changes in lesions; in my opinion its source being the sweat glands. This also is a factor that helps to clinch the diagnosis. It is not present with the early eruptions.

The changes that occur in papular lesions when they are subjected to the influence of heat and moisture, as in folds of skin that sweat freely (hence in the axillæ, infra-mammary and femoro-scrotal regions, intergluteal sulcus and circumanal region, also between the toes), are pathognomonic. They take on a fungating character and secrete an offensive moisture and are capped with a dirty white, membraneous exudate; and where they come in contact with previously unaffected skin new lesions appear. Such changes are not seen in ordinary skin diseases.

Inflammation beneath the free ends of the nails and around their borders (onychia and paronychia), also helps to make a decision. A papule will come in the localities mention-

ed and then pus forms and raises the nail from its bed; or the nail bed will thicken at the free end of a nail and it gradually loosens and then pus may or may not form.

The scars produced by syphilis are characteristic. In the first place, they are soft and non-contractile; and, in the second place, they are decidedly smaller in area than the lesion which they follow. They only form after involvement of the derma by a necrotic process, hence they are not usual in the early stages of the malady. Often they are pigmented and pigmentation is likely to be permanent. Simple dermatoses may cause pigmentation where the true skin has been destroyed and a history of the course of the preceding lesion must decide its nature. In the negro disappearance of syphilitic lesions or healing of an ulcerative process often results in whitish areas from loss of pigment.

A description of the varieties of syphilides, with their course, is out of the question in view of the restricted time. Of the generalized eruptions, as already mentioned, the erythematous is the earliest and probably the most common but may escape the observation of the patient. The small and large papular is quite common. The pustular varieties generally occur in individuals whose condition is much below par. The vesicular is a rare form, as is also the pigmentary. The bullous almost always occurs in children whose malady is inherited. While the different forms that invade large areas show fairly uniform lesions, yet here and there representatives of different types will exist. For example, some of the hyperaemic cases will have a proportion of roseolous spots that are thickened to form slightly elevated lesions. The papular ones will show a few pustular lesions or the papules that form show larger varieties among the small ones or vice versa.

The tubercular, late manifestations tend to spread in circinate or gyrate figures and always scar. It is this variety that throws greatest doubt upon the accuracy of the diagnosis. Often coming many years after the primary sore and after practically all corroborative symptoms have disappeared denial of infection by the patient often is accepted as truth by the physician. In this connection it might be well to emphasize the fact that chancre appears at the point of entrance of the infection and may have developed on any portion of the skin or mucous membrane accessible to contact by another individual or by infected articles. A double emphasis should be

placed on the mistake of considering that a history of some lesion on the penis proves a patient syphilitic; and, from what has just been said, a history of no lesion ever having been demonstrated there is no proof of contamination not having occurred.

Fortunately for patients and physicians, the Wassermann reaction can and should be employed to corroborate an uncertain diagnosis and surely when denial of infection by the patient cannot be controverted without it. No small number of my patients have been muzzled by a test of their blood by a disinterested laboratory worker and whose report that the disease was active was followed by uncomplaining persistence in treatment. When clinical evidence is backed by positive Wassermann showings the treatment to be pursued is unmistakable and leads to results that are surprising and gratifying to the patients.

The President then introduced Dr. David Riesman, Professor of Clinical Medicine in the University of Pennsylvania, who was to read a paper on "Visceral Syphilis." Dr. Riesman, before reading his paper, made a few remarks, saying that he looked upon himself as a bond of affinity between two scientific bodies that were striving for the same noble end, the good of humanity, and expressing the hope that such bonds might multiply. He then presented the following paper:

VISCERAL SYPHILIS.

BY DAVID RIESMAN, M.D.

Paper read by invitation in a Symposium on Syphilis before the Germantown Homœopathic Medical Society, Philadelphia, May 19, 1919.

"Know syphilis in all its manifestations and relations and all other things clinical will be added unto you."—*Sir William Osler.*

Our knowledge of syphilis, though still meagre, has been greatly advanced by the discovery of the Treponema pallidum and of the Wassermann reaction, through which the subject of visceral syphilis has received a tremendous impetus. As the time allowed me is limited, I will at once take up the manifestations of syphilis in the various visceral systems.

A. Cardiovascular Syphilis.

1. *Aortitis.* The spirochete of syphilis has a great preference for the wall of the aorta where it imbeds itself and where it may seemingly live forever. According to Klotz, it follows the lymphatic pathways which are richest in the ascending and transverse portions of the arch. The result of its activities is an inflammation, primarily of the media, and then of the adventitia, leading to a condition designated as aortitis. An *acute* form occurs, which is rare, and a *chronic*, which is often latent; and it is this latency that constitutes its danger, for when once it becomes manifest the process has usually gone too far to be curable. According to Levison, (Amer. Jour. Syph., January, 1918), aortitis is present in from 5 to 10 per cent. of all syphilitic cases. Its chief characteristics are pain resembling that of angina pectoris, but often most marked in the upper sternal region and radiating into one or both arms and to the back of the neck, to the region of the vertebra prominens. A systolic murmur is nearly always present at the aortic area; sometimes a double murmur indicating that the disease has extended downward and has involved the aortic cusps, with the production of an insufficiency of the aortic valve. The acute cases are accompanied by fever and a progressive anemia and resemble ulcerative endocarditis. Aortitis develops on an average about eighteen years after the primary infection. It should be remembered, however, that a history of primary infection is not always obtainable, patients either innocently or purposely concealing this important fact of the history.

2. *Aneurysm.* Aneurysm is closely allied to aortitis and is indeed a sequel of it. The relation of aneurysm and syphilis is very much like that of tabes dorsalis and syphilis. This fact has led me to adopt the routine practice of examining every patient with aneurysm for symptoms and signs of locomotor ataxia.

3. *Myocarditis.* My experience in myocarditis coincides with that of Christian, who found, clinically at least, that syphilis was not a frequent cause of myocarditis. There is undoubtedly a true syphilitic myocarditis which permits of diagnosis during life. A positive Wassermann test, evidence of syphilis elsewhere, frequent precordial pains, the patient being somewhat younger than the average cases of non-syphi-

litic myocarditis, and the beneficial effect of antisyphilitic medication establish the diagnosis. It is quite possible that the cases which respond to the Niemeyer capsule, which contains calomel, do so because they are syphilitic in origin.

4. *Angina pectoris.* Though Warthin, Amer. Jour. Syph., July, 1918, p. 425, found syphilis in every case of angina pectoris examined by him post mortem, my own clinical studies have rather led me to a contrary view, that syphilis is not a frequent cause of true angina pectoris. At any rate, angina pectoris is much more common in private than in hospital practice, whereas in syphilis the reverse is true.

5. *Adams-Stokes' disease.* Syphilis undoubtedly plays an important part in the production of the Adams-Stokes syndrome or heart block. Either a gumma or the histologic process described by Warthin may affect the bundle of His, a condition I would designate *syphilitic hisitis.* I am in the habit, even when the Wassermann reaction is negative, of using mercurial inunctions in cases of Adams-Stokes' disease.

6. *Arteriosclerosis.* Syphilis is a very important factor in the production of arteriosclerosis in certain vascular territories, especially in that of the brain. Elsewhere, except in the aorta, it does not hold a prominent place. I have not often found it a factor in the production of endarteritis or thromboangeitis obliterans leading to intermittent claudication or gangrene.

B. Gastrointestinal Syphilis.

1. *The stomach.* Through the work of Eustermann, of the Mayo Clinic, a good deal of light has been thrown upon the subject of gastric syphilis, until recently rarely mentioned in medical literature. Gastric syphilis may simulate ulcer or cancer; a tumor is, however, seldom detected. Hourglass stomach is one of the consequences, or through a general contracting fibrosis of the organ, the so-called linitis plastica or leather bottle stomach may be produced. The diagnosis is based upon the presence of syphilitic lesions elsewhere, a positive Wassermann reaction, a history of syphilis, and the good results of treatment. Histologic study is at times, however, the only way in which a decision can be reached.

2. *The liver.* The liver is one of the commoner seats of syphilitic infection, both in the congenital and in the acquired form of the disease. Clinically, the condition resembles cir-

rhosis, anatomically it produces a scarred, lobulated liver, the *hepar lobatum*. Syphilitic jaundice is an interesting manifestation which I will merely mention.

3. *The pancreas.* On account of its possible relation to diabetes mellitus, syphilis of the pancreas is important, especially since the frequency of latent syphilis in the organ has become known. It is the part of wisdom, therefore, to make a Wassermann test in all cases of diabetes.

4. *The rectum.* Stricture of the rectum is not an uncommon sequel of syphilis. It should be remembered, however, that a rectal stricture in a syphilitic may be malignant. At this moment I have under my care a physician who has a large carcinoma of the rectosigmoid region and, at the same time, through innocent infection, a four-plus Wassermann.*

C. The Kidney.

Syphilis of the kidney is a controversial subject. A syphilitic may have Bright's disease from the identical causes that produce it in other persons; so that it does not follow, when the two diseases are associated, that they are directly related as cause and effect. Aside from amyloid disease, which may be due to syphilis, though strictly speaking it is not a syphilitic lesion, there is a true syphilitic nephritis associated with the appearance of lipoid bodies in the urine.

D. The Lung.

Though not infrequently diagnosed, syphilis of the lung is clinically a rare condition in the adult. The majority of cases of so-called pulmonary syphilis are really cases of pulmonary tuberculosis with negative sputum. The two diseases may occur together. Syphilis of the lung is usually a fibroid process, starting from the hilus and extending outward along the bronchi. The absence of tubercle bacilli, the radiographic findings, the positive Wassermann, and the therapeutic test establish the diagnosis.

E. The Ductless Glands.

A good deal might be said upon the subject of syphilis of the ductless glands, but it was evidently not the intention of

* The tumor was recently extirpated, through a Kraske operation, by Dr. Deaver, and proved to be a typical annular carcinoma.

the arranger of the program that I should enter upon this field. I shall, however, say a word about the *spleen.* It appears that the spleen, like the wall of the aorta, is a favorite nesting place for the spirochetes, where they are more or less secure against antisyphilitic medication. The spleen may be infected both in congenital and in acquired lues. It is usually much enlarged and sometimes painful and tender in consequence of perisplenitis. There is also a pronounced anemia. In the differential diagnosis, which is at times one of the most difficult problems of clinical medicine, malaria, septic endocarditis, and Banti's disease must be considered—they have to be ruled out by the same criteria as are employed in the case of other organs. In the treatment of syphilis of the spleen good results have been obtained through extirpation of the organ, followed by active antisyphilitic medication.

F. Syphilitic Fever.

I might have discussed this subject in connection with almost any phase of visceral syphilis, for fever may occur in syphilis of the aorta, of the liver, of the lung, and of the spleen.* It may be remittent, intermittent, or totally irregular, and has been known to resemble the fever of tuberculosis, of malaria, and of sepsis. A correct diagnosis can be made only by a careful history, a thorough physical examination, the routine Wassermann test and, most important of all, by the therapeutic result.

I cannot leave the subject of visceral syphilis without saying a word about the Wassermann reaction. The Wassermann test is sometimes negative in definitely syphilitic cases, and may, of course, become negative in consequence of treatment. In doubtful cases a provocative Wassermann test may be made, but, as Stokes and O'Leary (Mayo Clinics, Vol. ix, 1917, p. 591), have shown this is of comparatively little service in visceral syphilis.

The fifth paper in the Symposium was one by Dr. C. Sigmund Raue, entitled, "Hereditary Syphilis," which was as follows:

* I am not speaking of the fever that is so common in the secondary stage of syphilis, with the onset of the dermal efflorescence, as that does not belong to the visceral manifestations of the disease.

HEREDITARY SYPHILIS.

BY

C. S. RAUE, M.D.

As a result of syphilitic infection from the mother the infant may be still-born without manifest lesions of syphilis. Spirochaetæ may, however, be demonstrated in the internal organs. Usually such an infant is premature or physically undeveloped. The skin may be mascerated but this condition is no absolute proof of the existence of syphilis. However, in the majority of cases of syphilitic still-born infants, or those dying shortly after birth, enlargement of the spleen and liver and bone changes (epiphyseal osteochondritis) can be demonstrated.

The classical manifestations of syphilis which develop after birth are palmo-plantar pemphigus, coryza, cutaneous syphilides, epiphysitis and cachexia. These symptoms develop in the order named, and it is important from the standpoint of diagnosis and treatment to have a proper understanding of the evolution of the disease.

Pemphigus may develop in the fetus during the sixth or seventh month. It is, therefore, usually present at birth and represents the earliest clinical manifestation of syphilis. The lesions consist of bullae about one centimeter in diameter, situated upon the palms of the hands and soles of the feet. The epidermis is loosened from the true skin and has a bleached macerated appearance. While the bullae are intact they contain a yellowish fluid. The bullae soon dry up and the epidermis falls away, leaving a raw copper colored surface.

Coryza is one of the most constant manifestations of syphilis. It develops shortly after birth, that is, during the first three weeks. At times it is the only symptom present, the child appearing to be in good health otherwise.

The earliest manifestations are a serous nasal discharge which later becomes sero-purulent. The nose is obstructed and the infant's respirations become noisy and embarrassed. The discharge is irritating and leads to erosion of the skin about the nares and mouth with the development of fissures in these localities.

Cutaneous syphilides appear shortly after the coryza. They consist of pink, oval macules more or less general in distribution. At the end of a few days they become copper

colored and desquamate. Wherever these papules are exposed to moisture, especially about the buttocks and about the mouth their surface becomes macerated and they increase in size and become converted into ulcers and fissures.

If the infant does not receive prompt medical attention it soon loses weight, becomes anemic and develops a characteristic grayish yellow color—*le teint café au lait*—due to the anemia and profound hepatic disturbance. The liver and spleen are usually enlarged. A hemorrhagic tendency may be present. Death from marasmus usually supervenes. If, however, the early stages are benign in character or have been controlled by treatment but not entirely eradicated, there may develop later such manifestations as epiphysitis, meningitis, hydrocephalus and interstitial keratitis.

The early recognition of hereditary syphilis and early institution of specific treatment influences materially the prognosis. In the majority of instances prompt improvement is noted from the administration of mercury either by mouth or by inunction. The latter method is preferable since it does not induce diarrhoea and since it acts quicker. Ten grains of unguentum hygrargyrum daily until the symptoms have been controlled. The inunctions may be discontinued for several weeks and then resumed for several weeks keeping the child under treatment for at least a year. During the remissions in the mercurial treatment, potassium iodid, 2 to 5 grains, t.i.d. may be given for the visceral lesions which are always present in these cases, *i. e.*, diffuse gummatous infiltration of the liver, spleen and sometimes of the lungs.

Cases which do not promptly respond to mercurial treatment, or in the more severe cases presenting such conditions as destructive changes in the nasal septum, rapidly progressing inanition, involvement of the eyes or of the nervous system, recourse should be had to the more quickly acting arsenical preparations. Neosalvarsan is the best one of these because it is least toxic and irritating and may be given intramuscularly in oil. The best results, however, are obtained by giving salvarsan intravenously.

The superior longitudinal sinus has recently become the accepted route for the purpose of administering salvarsan intravenously to an infant. Helmholz, of Chicago, in 1915 called attention to the clinical practicability of this route. Dunn and Howell, of Boston, successfully used the sinus for ob-

taining blood for the Wassermann reaction and later gave salvarsan injections into the sinus. During the past three years many articles have appeared on this subject all pointing to the practicability of using the sinus both for the purpose of obtaining blood and for giving intravenous medication.

The dose of salvarsan is .05 grams for an infant one to three months old and 0.1 gram for three to six months. Holt allows 0.01 gm. per kilogram of body weight. The dose of neosalvarsan is 1½ times that of salvarsan. The injection may have to be repeated at the end of a week.

As soon as the urgent symptoms have been controlled mercurial treatment should be resumed. The Wassermann reaction may be employed in order to control the treatment, but it must be remembered that the reaction is often absent in syphilitic infants during the first month and under such circumstances it is of no value.

The sixth contribution was given extemporaneously, as follows:

NEUROLOGICAL SYPHILIS.

BY

WESTON D. BAYLEY, M.D.

Anyone who can even scratch the surface of the subject of neurological syphilis in ten minutes' time must have the prodigious mentality of the celebrated bishop who visited a colored church, and was introduced by the minister with a eulogy which closed with the remark: "This yere parson is sure a very celebrated man. He knows the unknowable, he kin do the undoable, and he kin onscrew the onscrutable."

Now, when syphilis has been thoroughly and completely "cured" by all these gentlemen, in their various specialties and departments, who have just spoken, their cases naturally drift into the hands of the neurologist; but by this time the patient is usually financially "broke," and the neurologist must perforce accept the case as a charity one; but this is not an uncommon experience with the neurologist practitioner, anyhow. Another advantage which these gentlemen can claim over the poor but uncomplaining neurologist is that they are dealing with more concrete manifestations. Their work is with things

objective and tangible. They can see the chancre; they can demonstrate the spirochete; the skin lesions are visible, and usually typical; but the poor neurologist has nothing of this kind to guide him. His diagnostic judgment must be based upon inference and indirect data; objective symptoms having disappeared. Therefore, the neurologist's method of procedure must be quite different from that of the other specialists. For instance, my amiable friend, Dr. Ashcraft, in making his case record, merely puts down: "Hunterian chancre; one week's duration; salvarsan; $25.00." This tells the whole story; it is quick and easy. There is no trouble about it. But the neurologist must make a very thorough and complete record of the entire medical history. He must then piece together symptomatic fragments and interpret their significance; and this is not always a small job.

When Dr. Bartlett and I, thirty years ago, had the Neurological Department of Hahnemann Dispensary, down in the coal cellar, with our desk adjacent to the coal bin, we made these complete and exhaustive records. We made these careful and critical studies of our cases; and I warrant you that there were not many cases of neurological syphilis that got by us, even at that remote period. We had to depend, it is true, entirely upon our clinical study and the therapeutic test, lacking altogether the refinements of and assistance from the modern laboratory; but we succeeded very well with these cases, and can reflect on that period with personal satisfaction.

In the short time allotted to me, there is no use in mentioning the typical and classical syphilitic and parasyphilitic diseases of the nervous system. Anyone should know, for instance, what kind of hemiplegia is syphilitic, or else never attempt to treat a case of hemiplegia. Anyone should be able to diagnose locomotor ataxia and paresis. These need no further consideration. But it is the obscure cases, the unusual and atypical things confronting the neurologist, which come to mind as of greater importance at this moment. We must regard with suspicion anyone, in the period of adolescence or presenility, who manifests unusual neurological phenomena, things that do not fit in with the classical descriptions in the textbooks, things that have no title, no label on them. These are often syphilitic. Dr. Riesman almost stole some of my ten minutes when he spoke of presenile atheroma;

and he very properly said that this is more apt to affect the cerebral vessels than any others. When you find a young person with diseased arteries and with no family history of such a condition, it is nearly always syphilitic. We then have to look for other little sign-posts, which may be hidden under the foliage of a more conspicuous symptomatology—little significant things, such as a transient diplopia; or strabismus; some involvement of a cranial nerve not to be accounted for by other conditions (perhaps multiple involvement of the cranial nerves, unaccountable or unaccounted for); increased reflexes, peculiar headaches (a constant boring, severe headache, coming on in a young person, without obvious cause, and being usually worse at night); and transient paralyses—monoplegic or hemiplegic in type. These are the little sign-posts that may arouse neurological suspicion and reveal the syphilitic origin of a neurological disease.

Now, in formulating the treatment, we must first bear in mind the line of demarcation between a syphilitic lesion *per se* and post-syphilitic changes. For instance, in syphilitic cerebral endarteritis, we may have thrombosis. That thrombotic lesion is purely syphilitic; but when the involved vessels close and secondary softening takes place in the brain (the part of the brain supplied by that vessel), that softening is not syphilitic, and we get no result from antispecific measures in this purely secondary condition, if it is well established. Preliminary to all treatment, it is my custom to have a very plain talk with the patient. I tell him of the vagaries of syphilis and impress him with the fact that no one ever knows for a certainty when it is "cured." I think that it was Fournier who said, "Syphilis sleeps, but never dies." The patient is told that he must remain under treatment and observation during a time of my own choosing, or else I prefer not to begin the treatment of the case.

Our experience with mercury and iodide of potash in years gone by was such that I have never abandoned these staunch old therapeutic friends. When I use mercury in syphilis, it is always either by inunction or internally, or both. I never use it hypodermically. Usually I administer the mixed treatment of mercury and iodide of potash together. There is no question but that salvarsan has accomplished brilliant results, and I think it is a remedy for quick action. It should be avoided, however, when there are lesions in or about the

medulla, and here I believe mercury and iodide of potash are safer drugs.

I confess I never know when a case of neurological syphilis is cured. I only know when it gets better. I make this statement, because I have seen many even long delayed recurrences, for instance, a syphilitic hemiplegia completely clear up, with absolute disappearance of all symptoms; and then, fifteen or twenty years later, with a neglected interval the patient die of chronic cerebral endarteritis, syphilitic in character. In closing these remarks I wish to emphasize this observation: We never know when we have cured syphilis. We only know when we have alleviated the condition, and it is much safer for a syphilitic to keep under periodical observation during the remainder of his life.

The seventh paper was one by Dr. George A. Hopp, on, "Intraspinal Treatment of Nerve Syphilis." It was read, and was as follows:

INTRASPINAL TREATMENT OF NERVE SYPHILIS.

BY

GEORGE A. HOPP, M.D.

The treatment of syphilis of the nervous system by means of the arsenical preparations has within the past five years engaged considerable attention. Good results may be said to have accrued from all the various methods—intravenous, intraspinal and intracranial—and also the intensive treatment. Time will not permit of a full discussion of the theory of the different methods, but I might mention the assumed principle.

The method devised by Swift and Ellis is the use of the auto arsphenamized serum; the method by Ogilvie, that by which the human serum is arsphenamized in vitro with a known amount of drug; the method of Ravaut in which the diluted arsphenamine or neo-arsphenamine is added directly to the spinal fluid. Many disastrous results have followed the use of this last method. A further method employed is the one in which the intravenous injection of arsphenamine is followed, after an interval of five minutes, by lumbar puncture, evacuating at least 10 c.c. of spinal fluid. This form of treat-

ment is now being used by Dr. Sappington in several cases. The methods used for paresis are the subdural and intraventricular.

Serology. There are many cases of existing syphilis of the nervous system that are passed over by physicians and discovered only when an examination of the spinal fluid is made. It has been shown that the central nervous system is not infrequently invaded by spirochetæ in the primary and secondary stages of syphilis. There is often a slight pathological alteration of the spinal fluid during the time of the outbreak of the first cutaneous eruption; and there is a rash on the meninges much the same as in the skin and mucous membrane. By frequent examinations of the spinal fluid, Wile, Stokes and Hauptman have found that the spinal fluid may show the presence of the syphilitic antibody, which is concerned in the Wassermann reaction, and present abnormal chemical and cytological changes in the primary and early secondary periods of that infection, with or without any clinical symptoms. There are cases of neuro-syphilis in which there are established in the blood vessels of the brain and cord, foci infection, which may remain latent for years, or slowly compromise, by pressure and degeneration, important centers of tracts. Invasion of the brain parenchyma may be present for years with few or no symptoms. By serological examinations of the spinal fluid alone may the character of the lesion be revealed. It cannot be emphasized too often that a careful examination should be made of the spinal fluid during the early stages of syphilis.

In early cases of syphilis of the nervous system if treated more promptly and more rapidly than the older infection (intensive treatment), there is a chance of cure and prophylaxis against destruction of the nervous system mechanism. Patients with syphilis in the florid stage, die from acute meningitis, in spite of the intensive treatment; or they become candidates for paresis, tabes, or cerebrospinal syphilis. Usually clinical improvement and laboratory findings sustain a direct relation, the one to the other; but there are exceptions. Ayer points out that the Wassermann reaction may persist and the patient show no advancing symptoms. According to Southard the most vigorous arsphenamine therapy may fail to render the spinal fluid negative; yet the clinical condition may improve so greatly that the patient may be regarded as clinically re-

covered. I have seen similar cases under Dr. Sappington's supervision, in which the blood became negative and the clinical symptoms improved; yet the spinal fluid gave a positive Wassermann reaction. Dr. Fordyce says that the medical men attach no value to the serology of the cerebrospinal fluid because they have not had an opportunity to correlate their clinical observation with long-continued and accurate investigations along these lines. There are many patients who will improve with the intravenous injections of arsphenamine. Improvement of this sort has been reported by Dr. Fordyce in cases of pure arterial syphilis of the brain and cord. In such cases intraspinal treatment is not indicated.

The treatment of tabes by the intraspinal method has shown some improvement in cases treated early. The ataxia has completely or apparently disappeared, as well as other symptoms. In advanced cases, there is not a great deal to be claimed, as degenerated nerve fibres cannot be regenerated. Riggs and Hamnus reported that 70 per cent. of their cases of tabes showed marked improvement by the intraspinal method.

My experience is limited. The majority of cases with which I came in contact were those that Dr. Sappington reported several years ago. At the present time he has under treatment a patient with tabes who has an idiosyncrasy for intravenous injections of arsphenamine. Cummer and Dexter reported several cases of this kind. While the first two treatments are well borne in such cases, the subsequent ones produce gastric symptoms of much severity. The treatment for such a case, is the method advised by Ogelvie. There are cases that, though able to stand treatment, show little or no improvement, and are latter followed by a relapse.

It is a well known fact that the percentage of remissions in paresis is much greater in treated than in untreated cases. The report of Cotton showed that in 4 per cent. of his cases the remission occurred. In Salmon's summary of 300 untreated cases, five left the hospital able to work, while in treated cases 25 per cent. were able to leave self-supporting. Dr. Fordyce's view of paresis is that little can be expected from any form of treatment, when they reach the stage where institutional care should be established. Four cases were treated by Drs. Sappington and Northrop by the intraventricular method. The first case, had a number of treatments followed by remissions for some time. When another outbreak oc-

curred, the patient was placed in an institution for care, where he later died. The second case after several treatments died from some other infection. The third case, at the present time, is having a remission. The fourth is still under treatment.

Dr. Sappington has under his care a case of preparesis. This patient presented no paretic symptoms, yet his spinal fluid gave a strongly positive Wassermann reaction and a distinctly paretic curve with the gold test. According to Dr. Fordyce, in preparetic types, good results can be obtained and the disease arrested. Campbell and Ballance suggest that the treatment for the arrest of optic atrophy should be by the introduction of arsphenamized serum into the lateral ventricle. They also report that good results have been seen in general paralysis of the insane by the intraventricular injection of arsphenamized serum.

Much progress has been made in our knowledge of the nature, development, prognosis and treatment of neuro-syphilis. If nature can stop a paretic process, why cannot man do as much? Careful early treatment of syphilis will prevent tabes and paresis in the future.

The eighth contribution to the Symposium was presented by another "bond of affinity," Dr. Ernest Laplace, Professor of Surgery in the University Post-Graduate College, and was entitled, "Relation of Syphilis to Surgery." This paper was delivered extemporaneously, as follows:

RELATION OF SYPHILIS TO SURGERY.

BY

ERNEST LAPLACE, M.D., F.A.C.S.

Syphilis would have no relation to surgery if the profession had been able to cure the disease in its first or second stage. It is because syphilis has not been cured in the first or second stage that surgical syphilis exists. The patient having been treated by ordinary or extraordinary methods and pronounced cured, lived in ignorance of the fact that he really was not cured. A surgical affection developed either external or internal; affecting the viscera, the brain or some other part of the body. The patient was apparently cured and may have ceased to give a positive Wassermann reaction; but a negative

reaction is not a certain evidence that a patient is free from syphilis. Having a negative reaction simply means that there are not enough toxins issuing from the spirochetæ to prove reactive to the Wassermann test. That is all it proves. It does not prove that the spirochetæ are dead, any more than the grain in the granary is dead. They are there hibernating, and ready to wake up when the system is free from whatever element of treatment has been left there, or when certain conditions arise that are favorable to their renewed growth.

There may be various strains of spirochetæ—strains that refuse to grow in the individual or may be attenuated. The strain of the organism makes all the difference in the world as to whether it produces disease or not. There is the theory on which the use of vaccine is based, so why should be be surprised that the same thing exists in the body with regard to the various strains of spirochetæ, especially when modified by treatment?

So here we start with the fact that the theory of Ehrlich "Sterilizatio Therapeutica Magna" does not exist. It was his golden dream. He admitted it. We are never sure that the patient is cured. We are sure that the symptoms disappear and the Wassermann test is negative, but not that the patient is cured. Hence surgery in syphilis, now and in the future. Therefore, granted such a condition in a patient who has had syphilis, granted a traumatism that provokes on the spot a condition favorable for the development of the germs lying there, the disease will be waked into activity, just as the heat and moisture awaken the grain in the granary, and cause it to germinate. We have then the various manifestations of the disease, all of which are more or less gummatous. That means that in the fibrous tissue spaces there is a deposit that looks like gum. This forms a mass that looks like a tumor and may be mistaken for a sarcoma or a carcinoma. The physician may think that it is cancer or malignant disease, but it is nothing but a deposit of this glue-like substance provoked by the newly developing germs.

I have in mind a case that went the rounds of the clinics some years ago. The patient had an enormous mass of the abdominal wall, pronounced inoperable. I did not like to cut into it; but I did so and took a sneaking view of it. When I cut into the muscular structure, I found the red muscle fibre spread apart, and in between them a whitish mass. I made

up my mind that it was a gumma. It melted almost like snow under the noon-day sun upon the administration of mercurial treatment. The man is a musician who lives in the Italian quarter and is well today.

All these growths must be considered in the light of being specific before being pronounced malignant. These so-called dermoid growths, however, should, as I have said, be considered as possibly being specific, and a Wassermann test made.

Now it has been said by many that all so-called cancers of the tongue are specific at first—that they were at one time syphilitic; and that it is because they were allowed to remain untreated for a long time, that they degenerated into malignancy. I believe that this is true. Most cancers of the tongue begin as syphilitic leukoplakia; and because they are not properly recognized and treated, they soon become malignant, and the patient perishes from cancer later. Then we have the same sequence running down the intestinal tract. The ulcers of the esophagus that degenerate afterwards into malignancy and gradually give rise to stricture, etc., may begin in this way. In the stomach, the chief manifestation is an hour-glass contraction, which is often mistaken for a cancer. It requires the surgeon himself to make the differential diagnosis; and even he with the growth in his hand, is often unable to tell the difference between the two clinically. I have no doubt that a good many syphilitic stomachs have been resected because they looked so malignant at the time of operation.

The pancreas often shows a very remarkable condition. I remember operating a few years ago, for intense jaundice, and to my great horror, I found a pancreas with a mass of great size at its tail. The patient was the wife of a prominent clergyman here. I closed up the wound, and gave an unfavorable prognosis, concluding that the mass was cancerous. This was before the days of the Wassermann reaction. However, I had been taught by Fournier, of Paris, never to give up such a case, because it might prove to be syphilitic. It proved so in this case, and the patient is well today and has had two children since then. The cancer, as I thought it to be, disappeared; so we should not be too quick to call an enlarged pancreas cancerous.

Most strictures of the rectum are syphilitic, unless we

have a fungoid mass which is really carcinomatous. If it is a fibrous mass, you may be sure it is really syphilitic.

Bone reacts to syphilis well in the tertiary stage. The most noticeable effect is about the skull, giving that peculiar appearance sometimes seen in this disease. When the gangrenous condition is cleared up, you find the bone has been eaten away so as to resemble a sponge. This is called osteoporosis. The bone substance has been eaten away, leaving the skeleton of the bone.

Finally, we have conditions that seem to be syphilitic—ought to be because there are traces of syphilis about the body. The Wassermann is negative, but that does not mean that the condition is not syphilis. We can give the therapeutic test or give a provocative salvarsan injection. The latter will wake up the slumbering germs, so that they will give out their poison; and that is what we are looking for. This provocative test is very important. Of 100 cases suspected to be syphilitic, in which the Wassermann was negative, 18 were found to be positive after a provocative test. Tell-tale scars make us suspect it, and we should, if possible, make sure by the test. That will make procedure curative later on.

Last but not least, I wish to speak of blood infection. I will give an instance of what I mean—so-called syphilitic fever in its relation to surgery. This case will always remain in my mind as the most striking illustration of the fact that we must always be awake to the possibility of a case being syphilitic.

A nun, twenty-six or twenty-seven years of age had spent her whole life in an orphan asylum and later joined the sisterhood. Running after a child in that asylum she fell and injured her hand on a bit of glass. She thought nothing of it, and some of the other nuns treated it until it developed an abscess and an erysipelatous condition running up the arm. The temperature rose to 106 degrees, and she then developed forty abscesses, all over her body. She was reduced to utter weakness, and got so that she was almost pulseless. She had a fever of 105 degrees and 106 degrees F., and the pulse rate was 130. There was nausea and vomiting, and nothing seemed to be of any avail. The oldest nurse there who knew me very well and who always had a suspicion about everything, said to me, when I declared there was no hope at all for the patient: "Doctor, in other cases you have always put the patient on the specific treatment; why don't you do so in this case?" I had

not thought of it, knowing who the patient was and the history of this injury; but as she was so near dead and I had practically given up the case, I decided that I would try it. I put her on the mercury and iodid treatment, and she got well promptly—within two weeks—and is living today. I had opened forty abscesses on her body. Evidently this poor woman had hereditary syphilis, and it took this particular injury to wake up the slumbering germs there; and her body having very little resistance, the streptococci got in their work. It was a mixed infection, but one that was dominated by syphilis. I claim no merit for the fact that this woman is alive today. The nurse should have all the credit for it.

Among bone infections you must not forget that nasal bones react very easily to syphilis and in a case of hereditary syphilis, should the bones of the nose be injured at all, the result will be the flat nose with absent bridge that so frequently exists in cases of hereditary syphilis.

What must we conclude from all this? As I started I wish to close by saying that if physicians had all a real understanding of the therapeutics of the primary and secondary stages of syphilis, there would be no surgical syphilis, but there is surgical syphilis, and, therefore, what must we conclude, should we wish to eliminate surgical syphilis? Why should we wait until we get surgical syphilis to prove that the patient was not cured in his secondary stage? The only alternative is that we must assume that there is no demonstrable cure for syphilis; that there is a complete and perfect relief, to the extent that the patient thinks he is cured, but we know that the germs may only be slumbering, ready to wake up sooner or later, externally or internally—call it neurological syphilis, syphilis of the intestines, syphilis of the viscera, or what not; but it goes back to the same cause; that the case was not absolutely cured in the secondary stage.

If the case was not absolutely cured, then what follows? It follows that we must tell our patient, when he presents himself finally, after a prolonged treatment, with the Wassermann negative, "The test is negative now, but I cannot tell you whether it will be so next year. Therefore, come then and have another test made." The use of the Wassermann reaction has existed too short a time for us to draw any permanent conclusion as to its worth in diagnosing the absence of syphilis. Its worth in diagnosing the presence of syphilis is

admitted, but in diagnosing the absence of that disease, it is too soon, as yet, to express an opinion upon it. Therefore, that being the case, we must suspect that it is possible that the disease still exists. We must go back to the great men in the past in syphilis, who taught us that it is a mild disease to those who fear it, but a terrible disease to those who ignore it. The corollary from that is: Being a mild disease to those who fear it, let us keep on fearing it, that it may remain a mild condition. The only way to show this fear is by treating the patient for a period of time every year during the remainder of his life. We shall then be going back to what Hutchinson said, that with mercury and iodide of potash, he never had his patients develop tertiary syphilis. He treated the patients of others having tertiary syphilis but his own patients never got it because he treated them for one month every year. He said that by doing that they could become the healthy grandfathers of healthy grandchildren.

A rising vote of thanks was given to the gentlemen who had taken part in this symposium.

The Treasurer's Report was presented, and took the usual course.

A bill for stationery and a bill for expense were presented, approved and ordered paid. Adjourned at 11 P. M.

ADDRESS TO THE GRADUATING CLASS OF HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA.

BY

HON. WARREN G. HARDING, U. S. SENATOR FROM OHIO.

Gentlemen of the Graduating Class:

HAHNEMANN must have been right in proclaiming like is cured by like. When we found the world suffering from the threatened domination of autocracy we made our republic autocratic and saved the civilization which autocracy threatened. But we didn't do our dosing with high attenuation.

I will not say that some homœopath thought to cure high cost of living with high cost of government, but we are witnesses to the experiment, and the patient needs an eliminative stimulant.

Fresh from the Senate, I may remark that high authority diagnosed the world patient as suffering from secret

diplomacy, and then we saw *similia similibus curanter* practiced in Paris. I do not venture a prognosis.

It must have been someone of another school who proclaimed our American ills due to national aspirations and prescribed internationality as a remedy, but my own judgment is that there is nothing dangerously wrong with the United States of America, and we need only to calm our nerves and correct our diet to go steadily on to robust maturity and glorious fulfillment.

These observations are not specifically appropriate to the occasion, except that I want to remark that this is a great time to live and achieve, a great period in which to seek the heights of attainment, professional or otherwise. Men are so often heard to say that opportunity no longer beckons as it once did. Nothing is farther from the inspiring truth. Opportunity calls today as never before. It is particularly true of the medical profession. Scientific medicine and surgery as revealed today, hailed triumphant in camp and on battlefield, make the practitioner of only fifty years ago seem like a pioneer in undeveloped fields.

Quite apart from the scientific side of the astounding and gratifying progress made, the world never called to men of talent and capacity as it calls today, and never rewarded them as it willingly rewards them now. This is true in every walk in life—true of men and women who can do things and are doing them.

A young son of a friend of mine was a student in the college of efficiency at the University of Michigan. He was more than a course racer, he was a seeker after efficiency. In his quest for knowledge he decided to employ a college holiday in visiting an automobile factory in a neighboring city—a factory famed for its efficient methods. Presenting his card at the superintendent's office, he sought the privilege of visiting the plant. An assistant superintendent was assigned to escort him, and they started where the initial work began and followed the ways of a flivver to its completion. The young student was an observant visitor, and after completing the round asked permission to retrace his steps. In the process of retracing he stopped at various points for more studious observation, and at two points he saw where improvements could be made and higher efficiency developed. He related his observations to the assistant superintendent,

who asked him to report to the general superintendent. Before the latter he outlined his suggestion of changes, and he was so convincing that the superintendent replied, "Young man, you may go to work here tomorrow at $2,400 for your first year." Pretty good for a boy of 17! But the youth replied, "No, I am engaged in a course of study and ambitious to complete it." "Very well," answered the factory official, "Go, finish your course, and then come back next year or the year after, and we will start you at $3,000, and the sky is the limit for a young man like you."

It is a curious contradiction, that while we have so much of organized endeavor to bring human kind to the level of mediocrity, the living, vital, dominant, advancing forces of humanity are calling for men of talent, and honoring and rewarding them as never before.

I am not sure that I can describe the great physician, but I know the nobility of the profession, and I have an abiding conviction that there is nothing in professional life to equal the attainments of a great diagnostician. It is a wonderful thing, even with modern aids of diagnosis, to determine what is out of gear in the wonderful machinery of the human body. I wonder how the old time physicians, with a fever thermometer, a count of the pulse and a glimpse at the tongue, and little or no record of their cases, made so many good guesses as they did. Luckily the errors were not recorded. And nature was patient and surpassingly enduring. A good old doctor friend, who reached both fame and fortune and has since gone to his eternal reward, once said to me: "The wonder is not how many patients we restored to health, but how many recovered in spite of us."

It may ill become a layman to speak of the ways to professional eminence, but I may offer some observations of experience, that experience which comes of fifty years as the son of a general practitioner, and more than thirty years as a newspaper man, recording professional successes and publishing the last tribute to those the doctors could not save. I am not an utter stranger to some phases of the medical professional life.

The preparedness of education goes without the saying. The requirements of the profession today, so notably advanced in one generation, puts preparedness beyond dispute. But there is a needful thing which no college can bestow, a

thing sometimes inherited but available through development, without which the heights are never reached. I refer to personality.

If I were to choose for myself, in the mental poise of health, in selecting a doctor for the day of illness, I should prefer one learned in his profession, of course, but if his learning were not illumined by personality, I should choose less of knowledge and more of that attribute which makes a physician the ideal healer of men.

I can't define personality and express all that it means. It is more than individuality. It is little concerned with idiosyncrasies. It is the blend of character and soul, and the marshalled spirits of individual life and activity. The helpful personality which makes the great physician is marked by cheerfulness, and radiates hope and inspires confidence. Grant that personality is inherent—there is so much that we inherit—that same personality can be trained and developed just as character is shaped.

A winning personality is so vitally essential to a physician's success that I can not emphasize it too strongly. The most eminent doctor in Washington today is of more help to his patient when he first enters the sick room than in his prescriptions which attend his visit. My own conviction comes of a personal experience: Years ago I became a patient of an eminent specialist of large experience, who probably knew all that was to be known in his specialty at that time. I pay willing tribute to his professional talent, but he lacked the personality to win my confidence and awaken my hopes, and he failed in my case, because I needed assurance—winning assurance—more than medicine and massage.

Next to personality is the capacity for decision. This involves knowledge and confidence and readiness for emergency. The men who lead the world are those who can quickly decide in great emergencies. In medicine and surgery there is call for prompt decision as in no other profession, and there is always more at stake because a human life is ever involved. The lawyer can correct his blunder, the journalist can change his mistaken course, the statesman may contradict his own utterance—and often does; the doctor of divinity may ask new guidance from On High, but you doctors of medicine and surgery are called upon to decide where a human life is

in the balance. An autopsy may reverse your judgment but it doesn't change the result.

Some months ago I went from breakfast on a Sunday morning with a friend to the golf course. We had barely started to drive off when a telephone call summoned him home. He found his wife ill. Circumstances made diagnosis difficult, but some hours later the patient's condition indicated an internal hemorrhage. A surgeon was called, and like a general in a critical period in battle, he declared immediate operation necessary. The family demurred, and asked delay until another eminent authority, two hundred miles away, could be called. "Unless you operate at once," said the man of decision, "this mother will be dead." His decision settled it. In fifteen minutes the patient was in a hospital, on an operating table, in fifteen minutes more a charming woman was saved to her husband and family. Yet a half hour longer of indecision would have left a home unspeakably bereaved. It is great to have the gift of knowledge, but infinitely greater to have the gift of decision.

Added to these qualities one more is absolutely essential to professional success. It applies to any walk in life. You must be in love with your tasks. Graduation isn't the completion of your studies, it is the great beginning. Name to me the great doctor, and I'll name to you a great student throughout his busy life. There is no end to seeking knowledge, and experience teaches what no text book or lecture can impart. And the physician worth while finds inspiration in revealing what he learns, to add to the sum total of professional understanding. Every doctor who hangs out a shingle ought to have the ambition to be the best in his profession. It pays to do things well, and it is a compensating distinction to do things best. It is great to be a top-notcher in whatever one undertakes. If I were going to be a jack-of-all-trades, it would be some satisfaction to be the greatest jack-of-all-trades ever criticized.

In the village where I spent my boyhood we had a character famed for being the greatest loafer in the town. He was distinguished in his chosen line. Mediocrity is No Man's Land in the battle of life. Thousands perish there, but the triumphant go across it.

No one need be apprehensive about rewards, the law rewarding merit is eternal. All the bolshevists of all time

can not repeal it, all the socialistic revolutionists and proponents of mediocrity's levels can not alter it. Opportunity beckons to all men, in trades, in professions, in public service and private pursuits, and rewards them as they merit it.

What is reward? Answer that question and I can utter any man's prospect of attainment as he answers it. Material gain, comforting as its contemplation is, impelling as it often proves, is not helpful inspiration nor ample reward. It little matters what the world seems to think, no man permanently succeeds in any pursuit in life who labors for material reward alone. One must love his work to succeed. The man who loves his work for his work's sake, will scale the heights. He who glories in a task well done will never lack the inspiration to real achievement.

A few years ago I had occasion to note what struck me as a richly rewarded life. At the village of my birth I attended the funeral of a kinsman, and the veteran physician with whom my father read medicine and who attended the deceased in his professional capacity, officiated at the funeral. He was near to 90, and had spent 66 years of professional life in that village and community, not alone ministering to the sick, but he was rich in the confidence of all the people, and counseled with them in trouble, and sang and preached at times, conducted many a funeral, shared the community's joys and sorrows, and was known, and loved and respected by all, a venerated patriarch, great in accomplishment beyond the measuring by any material gain. The world little knew him, fame had no laurel for his brow but he lived wonderfully and nobly in the hearts of his fellows, and local traditions will honor him while human hearts are stirred by love and reverence and gratitude for service done.

It is not given to all men to win the gratitude or acclaim of state or nation, or the world at large. It isn't so much a question of capability as it is of circumstance or the grasping of opportunity in the limelight of modern publicity. Performances are often measured by the theater of operation. But the physician worth while, honoring himself and his profession, never fails to become foremost in the community he serves.

There is one other phase which I must mention. It is the influence of the physician on the life of his community, quite apart from his professional activity. The confidence

which the physician inspires unfailingly makes him a leader of men, and his influence in the social and civic life of the people surpasses that of most men. He thereby becomes sponsor for more than the physical well being of the field of his endeavor, he has much to do with the health and vigor of its civic and social and public life. And there is call these days for the leadership of men. The world is in a ferment. Orderly government is being put to the great test. The body politic has its ills. Our public nervous system is strained, and there are public ills to cure. Leaders of men have more than to perform the duties revealed in their professional fields, they are called to save the body politic and preserve the health of our civic and social life; aye, to make the life of the state and nation abidingly secure.

RŒNTGEN RAY THERAPY IN HYPERTHYROIDISM.

BY

W. C. BARKER, M.D., PHILADELPHIA.

Rœntgenologist of the Women's Homœopathic Hospital, Philadelphia.

(Read before the American Institute of Homœopathy, June, 1919.)

Introduction.—Our knowledge regarding the physiology of the thyroid gland is far from complete, which fact accounts for the confusion of thought on this subject, as expressed in the literature. An important part of the thyroid physiology seems to be the forming of chemical compounds of its products with some of the mineral elements, especially with iodin. The latter was first isolated by Bauman in 1895. In 1914, Kendall extracted a crystaline iodin compound from the gland, which, as he claims, when administered to the organism, will produce the symptoms of hyperthyroidism. Kocker believes phosphorus plays an important part in thyroid physiology, but the action of it is possibly antagonistic to that of iodin. The function of the thyroid is believed to be stimulated by the sympathetic nervous system, through the cervical ganglia. Cannon called attention to this fact in describing experiments made by Dr. R. H. Levy at the Harvard laboratories. It is by this means, that the connection between the thyroid and the other endocrine glands is so intimately maintained.

Symptoms.—The importance of the normal function of the gland can be appreciated only when there is an alteration in the output of the thyroid hormone. When the function is inhibited, there are marked changes in the vegetative system; and when it is accelerated there are changes in the nervous and cardiac system. The relation between the enlarged thyroid and exophthalmus has been known for many centuries; but it was for Graves in 1835 to describe the exophthalmus goiter syndrom; and for Basedow, in 1843, to again call attention to it. Moebius classified the disease as one of hypersecretion of the gland; Kocker as thyrotoxicosis; and Mayo as hyperthyroidism. While the cardinal symptoms of the affection are tachycardia, enlarged thyroid, tremor and exophthalmus, all of them are not necessarily present at one time, and when present, not always of equal severity.

Not all cases of thyroid trouble are alike, and it may be well to describe the course of some of the commoner varieties.

Some cases have a rapid onset with a tachycardia varying from normal to 160 or even higher, palpitation of the heart and shortness of breath. The nervous symptoms are often severe and are shown by tremor, restlessness and sleeplessness. Cases of this type have great prostration and loss of weight. A man thirty years old and weighing 198 pounds came under observation. In a few weeks his weight dropped to 95 pounds. At first, there is little or no enlargement of the gland, but it may occur later in the course of the disease. There may be no exophthalmus but a change in the expression of the eyes soon develops. This type might be characterized as acute hyperthyroidism.

There is another form in which there has been a goiter for years and perhaps some exophthalmus, but not until some severe nervous stress has occurred, have the symptoms of Graves' disease appeared.

It has been shown by Gauthier, Parhon and Gaulstein that there is a relation between the thyroid function and that of the ovaries. If so, we can explain the development of Graves' disease, when the ovaries cease to functionate as during pregnancy and after the menopause.

There is also a type of temporary hyperthyroidism. This occurs after hypertrophy of the gland, when it has been called upon to produce more thyroid secretion, as during the course of some debilitating disease such as typhoid fever. In these

cases, when the increased amount of the thyroid hormone is no longer needed and before the gland can atrophy, there may be some symptoms of Graves' disease.

Disturbances in the function of other of the endocrine glands, may excite hyperthyroidism. This can be inferred from Goetsch's test, which consists in injecting .5 c.c. of 1/1000 solution of epinephrin into a patient supposed to be suffering from hyperthyroidism. If the symptoms are due to the thyroid, they will be intensified, and what is more important, the action of the epinephrin will also be increased, which is shown by a greater rise in the blood pressure than is observed when the same quantity is injected into the normal individual. This relation between the function of the thyroid gland and that of the suprarenal glands, has been shown in a number of ways and by numerous observers. While the thyroid and the suprarenal glands stimulate each other, it has been found that they both inhibit the action of the pancreas; and the pancreas inhibits the action of either or both of these glands.

The relation of the thymus and the thyroid is very close. Norman has pointed out that hyperfunction of the thymus will cause or aggravate hyperthyroidism, and Klose goes so far as to state that Graves' disease is always associated with hypertrophy of the thymus. Crotti believes that in all cases of exaggerated Graves' disease, where in addition to the usual symptoms the thyroid is but slightly enlarged and all the subjective symptoms are exaggerated, where there is marked muscular asthenia, a lymphocytosis and an enlargement of the small lymph nodes in the cervical region, the thymus is hypertrophied.

There are some others, such as Sidney Pern, who believe that hyperthyroidism is set up by some toxic cause which is usually a septic focus, and others such as Arbuthnot Lane, who believe that the colon is the seat of the toxaemia.

Whatever may be the complex relation between the various glandular structures, through the sympathetic nervous system, and whatever part septic foci and infections may play, it seems that it is from the thyroid that a secretion is thrown into the blood, which gives rise to the symptoms of Graves' disease. Anatomically, this would appear to be so, as the thyroid is supplied profusely with blood through large vessels, and Mayo states that all the blood in the body passes through

the thyroid every hour. Furthermore, therapeutic evidence is offered to show that that which will inhibit the output of the thyroid gland will, in the large majority of cases, also control the symptoms of Graves' disease.

Diagnosis.—Before suggesting the rœntgen ray as a means to inhibit the thyroid function, the contraindications to its use should be considered. It must never be used to reduce the size of the gland, because the ray will stop the secretion of the normal gland, as well as the pathological one; and as the thyroid secretion is important to health, the result would be injurious. If the body needs a greater supply of the thyroid hormone, the gland will often hypertrophy to produce it. This is a physiological enlargement, and no attempt should be made to reduce it. If in the course of this hypertrophy, or for any reason, colloid substance is thrown out, and a simple goiter is formed, or there is adenomatous enlargement or any form of tumor, the rœntgen ray should not be used, because it acts first upon the secreting cell and will cause hypothyroidism before reducing the tumor.

We are often called upon to do something with the gland for cosmetic effects, for pressure symptoms as in the case of the annular variety and intrathoracic thyroid, for cystic degeneration and for malignancy. In such cases, surgery is to be preferred to any other form of treatment.

In the less severe types of hyperthyroidism occurring in young people, and in the temporary forms following acute infections, medical treatment without the rœntgen ray is to be favored.

In very acute cases when the patient is prostrated to the verge of collapse, it is better to postpone rœntgen therapy until after a period of rest, diet and medicinal treatment. Immediately after the rœntgen irradiation, it is possible that there is first a stimulation of the thyroid function, and in extreme cases, this may prove fatal to the patient. Two such cases were reported to me, both of which were treated in the same institution and both died within forty-eight hours after treatments. The technic as reported, showed that the dose was too light and this might have tended to stimulate glandular secretion. On the other hand, the rœntgen therapy may have had nothing to do with the fatalities and it seems better judgment to withhold the treatment rather than submit it to adverse criticism.

Technic.—To determine the presence of intrathoracic thyroid or hyperplasia of the thymus, every case should be first examined by the fluoroscope. The thyroid casts a dense shadow but the thymus is sometimes only faintly outlined; and if its involvement is suspected, stereoscopic plates should be examined. If the thymus condition cannot be demonstrated and the Crotti's syndrone is present, it is better to include the thymus area in the irradiation.

Areas.—If a line be drawn with ink from the hyoid bone to the top of the third rib in the mid line and this crossed with one at right angles at the top of the clavicals, there will be four areas. In order to prevent treating the same area more than once, they should be numbered 1, 2, 3, and 4. The areas so laid out, will include the thyroid and thymus. If it is decided to treat only the thyroid, it may be done through the two upper areas, unless the isthmus is enlarged; in which case the thyroid region should be treated through three areas. In special cases, as will be shown by the fluoroscopic examination, it may be necessary to irradiate through other areas.

Tube.—As accuracy is essential to success, no other than the Coolidge tube should be considered.

Spark.—To get the proper penetration, not less than a nine and one-half inch spark, measured between points, should be used, and a ten-inch one is better. Too low voltage will stimulate rather than inhibit cell action.

Milliampereage.—The milliamperage must be determined by the resistance in the control of the apparatus.

Distance.—The distance of the anode from the skin may be that suited to the apparatus, but it must be constant. The distance of eight inches is generally convenient. The tube is centered in the holder, so that the center of the anode is just five inches from the under surface of the filter. By an inside caliper set at three inches, the tube holder is lowered until the caliper just clears the under surface of the filter and the skin, making the total distance eight inches, which is always constant, because it is always measured.

Filter.—A filter of aluminum three millimeters in thickness, is satisfactory. There is so little gained in hardness of the rays above this thickness that it will not be worth the additional time required to give the dose.

Time.—The length of time for exposure varies with the amount of current, the spark back up, filter, and distance of

the anode from the skin, but must not be more than will produce epilation, because if an erythema dose is given, it will be followed by atrophy of the skin.

Dose.—The dose of the rœntgen ray which I use is from a Coolidge tube, with five milliamperes of current passing through it for three minutes, the resistance being equal to a ten inch spark measured between points, and the rœntgen rays filtered through three millimeters of aluminum. The anode is placed eight inches from the skin, the dose given through each area and the treatment repeated every four weeks.

Treatment.—Keeping in mind that the function of the thyroid is essential to health, it is important to know when to stop the rœntgen ray irradiation. In the average case, the subjective symptoms are the first to be relieved. The patient begins to feel less nervous, has less palpitation, sleeps better, is less irritable and has more ambition to work. The first of the objective symptoms to improve is the tachycardia, and this amelioration is the best guide in discontinuing the treatments. When the pulse is 160 or more, it may be reduced to 100, when the patient is at rest, before reducing the amount of raying. In cases where the pulse rate is 100 to 120, it may be reduced to 80 or 90, before stopping the treatments. The safe method is to treat every four weeks until the patient feels better.

After this lengthen the interval to six weeks, and finally to eight weeks. If there is a return of the symptoms, the interval may be shortened. In this way the thyroid output can be controlled without danger of producing hypothyroidism. The gland that is enlarged because of hypertrophy will reduce in size, but not until the other symptoms have subsided, and the exophthalmos will become less noticeable, which is shown by the loss of the staring expression. The number of treatments required varies in different cases. Some patients begin to feel better after the second treatment, and are cured in six months. However, it usually requires six to eight series at four week intervals, which are then lengthened to from eight to twelve weeks, and the patient kept under observation for about one year.

Summary.—In conclusion, the important facts are restated as follows:

To determine the areas to be treated a fluoroscopic examination should be made.

It is necessary to include the thymus, not only when a hyperplasia is demonstrated, but also when the Crotti's syndrone is present.

Use the Coolidge tube technic, giving the full dosage and high penetration to inhibit cell function.

As the patient improves, lengthen the intervals and thereby prevent hypothyroidism.

Always keep in mind that the reduction of the size of the thyroid for cosmetic purposes, for relief from pressure, or for removal of tumors whether benign or malignant, is a problem for the surgeon, and should never be attempted by rœntgen therapy.

That the use of the rœntgen ray in the treatment of the thyroid is only to inhibit cell action in hyperthyroidism. It will here take the place of surgery, with results which are as good and without scar and the danger attending an operation.

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EDITORIAL

THE MEDICAL PROFESSION AND THE WAR.

THE presidential address of Dr. Alexander Lambert, delivered at the recent meeting of the American Medical Association, should be placed, were it possible, in the hands of every intelligent person in the country.

Whatever may be the relative merits of our local disputes and political wrangles, there is an American idea, which may be aptly termed a national sentiment, and that is a square deal for every community and for every right-minded person in it. Personal liberty, fair play and the unhampered opportunity to develop the useful and beneficent arts of a progressive people are American ideals. This national altruism has been the directing genius of our splendid activities in Cuba and in the Philippines, and was our established attitude toward the whole world when the storm broke. Even then, America was painfully slow to comprehend the real situation. The idea of nationalized and official greed, cruelty and avarice, is so entirely foreign to the composite sentiment of this country, that it seemed amazingly incredible that a supposedly civilized nation could, as a unit, be dominated by these primitive motives, and deliberately spread woe and destruction throughout the whole civilized world. Our total unpreparedness for war and tardy reluctance in getting ready for it when every thinking person knew it was inevitable, is proof of the complete dominance of our national sentiment of universal peace and good will.

Another fact which looms large in a retrospective view of the recent horror, is that the man of peace may, with incredible celerity, become the man of war far more vigorous and terrible than the professional soldier trained in it from early youth. It will be a long time before the "contemptible little army" of England, and the "military mob" of America will be thus stigmatized by trained military men, in weighing their chances against peace-loving communities.

In his address, the President of the American Medical Association, has set forth the evolution of medical helpfulness in the dreadful calamities of war; and he duly emphasized what everybody (excepting certain trained military leaders) already knew, that military disease has always been more destructive than military weapons, yet how little attention is given to this cogent and significant fact by professional army officers whose business it is to be constantly preparing plans for the possible warfare of a country! How inadequate is the power and opportunity given to the medical arm in the function of preparedness! The disgraceful ravage of typhoid fever during the Spanish-American War was an instance of this indifference, neglect and incompetency.

The speaker pointed with pride to the fact that in the present war, medical men needed no conscription "to answer the call of duty." That "when the armistice was signed there were 35,000 medical officers in the army, and 3,000 in the navy, which represents about 26 per cent. of the entire profession of the country." This sounds very good and is a credit to the most unselfish and altruistic of all of the professions. Yet, how about the mechanism of qualification and fitness? Many competent surgeons did surgery; yet how many incompetents were there who attempted it, while real surgeons were turned down or given minor or misfit jobs for which they were less qualified? How many general practitioners attempted to do neurological work, while skilled neurologists patriotically offered their services in vain? "Experts" were ready-made by a few weeks or months of "intensive training," while real experts were left at home, or given work outside of their province. From returning officers we learn that this same lack of systematic forethought existed in other military specialties—notably the engineers.

This observation is in nowise an arraignment of those splendid volunteers of our profession who in many instances unhesitatingly sacrificed their practices for the common welfare; but it is a "constructive criticism" of the controlling powers; or, as the medical man might express it, one of those profitable considerations derived from experience to be carefully applied in the next case. It was left for the Council of National Defence to enroll a vast reserve of medical volunteers and carefully classify its membership according to their individual and specialized qualifications.

Of greater importance even than this was the founding and development of the base hospital organization, an idea which had its origin among the Red Cross workers. This utilization of groups of physicians, surgeons and nurses already accustomed to working together in our first-class hospitals, and thus transferring an already organized and efficient machine from civil to military life, was one of the most important advances in medico-military history.

The medical arm of the service can point with pride and satisfaction to its record in medical prophylaxis, for if we except the debacle of that influenza pandemic and our present therapeutic helplessness in pneumonia, many serious contagious diseases were almost abolished in the army; and (where measures could be taken) the decimating spread of pestilence in civil communities was promptly arrested by modern sanitation and preventive inoculation. In this connection the speaker significantly remarked: "The occurrence in the camps of meningitis, *another disease of the respiratory group,* as far as its portal of infection is concerned, has been forty-five times as frequent in the army as its occurrence in civil life among the same age group. This has been due to overcrowding and the diminution of air space allowed the individual soldier in badly ventilated barracks. *The responsibility for these sanitary sins rests on the General Staff and not on the Medical Corps.*"

The full significance of this observation does not appear on first reading, because it is seemingly applied only to the topic of meningitis; but linger for a moment over the remark, "Another disease of the respiratory group," and recall how this observation applies to kindred diseases of respiratory origin which resulted in our vast army mortality—and at once the Ethiopian looms larger than the wood-pile in the placing of responsibility for "these sanitary sins!" If this "constructive criticism" is nailed down good and hard, by stern public opinion, where it belongs, do you think it will happen again in our next atavistic recourse to the barbaric method of settling national or international disputes?

Since army efficiency depends on prevention and salvage applied to its individual units, the American Government should have in continuous service a competent medical board, with full power to act, in all matters pertaining to disease and sanitation; and this supervision should extend from the

broader principles down to the smallest details. If we have had "badly ventilated barracks" let there be no more of them to murder the splendid youth of our country. If there are fossilized military "precedents" or hampering red tape in the way of the exercise of free medical up-to-the-minute efficiency, let these be cut and burned, and at the other end of the line, if there were individual instances of medical indifference, neglect and incompetency in actual hospital practice, let the punishment be of such a character that it will not likely happen again.

The homœopathic school of medicine made a record of which we may well be proud, and what our men accomplished in the war will hasten that unity and mutual co-operation among the schools of medicine, which is so much to be desired. If our allopathic brethren were disposed to accept friendly criticism we would gently remind them of their self-confessed helplessness in influenza and pneumonia, and show them that at least, until some new therapeutic miracle is wrought, the adoption of the homœopathic method would have vastly lowered the mortality in these diseases. The proof of this is so obvious in our comparative results in civilian practice, that even he who runs may read.

It is unfortunate that the fast diminishing intolerance has not so far progressed with them as it has with us, since everything of established value in the old school is at once utilized with full credit, in our ranks; while our own therapeutic children, if adopted by them at all, are surreptitiously abducted and given a new name. This, however, is one of those passing conditions of life, which will have its morrow in complete friendliness and mutual understanding.

"We, like parted drops of rain
Swelling till they meet and run,
Shall be all absorbed again,
Melting, flowing into one."

W. D. Bayley.

THE INJECTION OF AIR INTO THE CEREBRAL VENTRICLES FOR DIAGNOSTIC PURPOSES.

The old adage, "there is nothing new under the sun," cannot be applied to the latest method of intracranial diagnosis, ventriculography, as originated and developed by Dr. Walter E. Dandy, of Baltimore, who describes his latest application of roentgenology as a diagnostic agent in the Annals of Surgery, July, 1918, and in the Johns Hopkins Bulletin for February, 1919. This method has proven its real value in seventy-five cases of intracranial lesions, being especially practical in the diagnosis of internal hydrocephalus and in detecting the presence of and locating brain tumors which encroach upon and distort the ventricles, particularly the lateral.

In preparing a patient for X-Ray examination of the abdominal organs, the roentgenologist first rids the tract of all gas possible by administering a purge, because, as we know, the intestinal gas obstructs the penetration of the X-Ray. Nevertheless, the X-rayist must confess that the gas in the intestinal lumen outlines and locates the individual coils and segments accurately. And this is exactly what Dandy employs to outline the ventricles—air, injected into them after the cerebrospinal fluid is withdrawn, and then the head is fluroscoped or radiographed.

The technique is comparatively simple. The point selected for the puncture is in, or at, the outer angle of the anterior fontanelle (if the latter be present) or just in front and to the outer side of the bregma (if the fontanelle is closed). A two-way piston syringe is used for aspirating the fluid and injecting the air. Then the fluroscope is used or the plate is exposed. The air is not removed afterward, but is permitted to remain and to be absorbed. Day by day the air shadow lessens and eventually disappears. In a case of internal hydrocephalus this absorption required two weeks.

Ventriculography has proven of great practical value. For the first time we have a means of diagnosing internal hydrocephalus in the early stages. Internal hydrocephalus is one of the most insidious diseases of the brain and is rarely diagnosed before a considerable amount of cortical destruction has resulted. This is true of adults as well as of children. With exact visualization of the ventricles the findings are

pathognomonic. Not only the existence of hydrocephalus but its degrees and the amount of brain destruction are at once evident from the ventriculogram.

The injection of air into the ventricles has had no deleterious effects in seventy-five cases. From 20 to 350 c.c. of air have been introduced into the ventricles.

NORTHROP.

PENNSYLVANIA STATE SOCIETY MEETING.

The Homœopathic Medical Society of the State of Pennsylvania will meet in Philadelphia September 16th, 17th and 18th. There is every reason to believe that this will be the best and the largest attended meeting the Society has known. It is ardently requested that every member shall do his duty by the Society by preparation of papers and attendance. A large number of members are delinquent as to the payment of dues. The Society is unnecessarily handicapped by not having received money which should have been sent in a long time ago. Most of this delinquency is due to carelessness. As soon as the delinquent member reads this he should make it his (THE WOMEN MEMBERS ARE ALL FAID UP) duty to send his check to the treasurer, Dr. Ella Goff, 10 North Diamond Street, N. S., Pittsburgh, Pa.

IT is of the greatest importance that members of the Society get busy at once in the matter of preparing papers for the coming meeting in Philadelphia. This meeting is expected to be the biggest in the history of the Society. Work has lagged owing to the absence of the secretary, Dr. Metzger, in military service. The doctor has now returned, and is now very much on the job. Every one is invited to prepare a paper. If you have one in mind just notify the secretary or the appropriate bureau chairman. (See list of same at top of page 45, News Section, June HAHNEMANNIAN MONTHLY.)

GLEANINGS

MEDICINE

Conducted by Clarence Bartlett, M. D.

Radium in the Treatment of Carcinoma.—Marion, (*Jour. d'Urologie*) describes a technique for using radium in the treatment of carcinoma of the prostate. He thought that it would be preferable to introduce the radium into the substance of the prostate than either to introduce through perineal incision or through one in the bladder, and devised the following method:

The perineum is punctured on each side of the median line, and a large trochar is introduced into each incision, using a finger in the rectum as a guide and carrying the tip of the instrument into the substance of the gland. Withdrawing the trochar, the author passes a tube of radium through the cannula until it reaches the end of the same. A tunneled sound is used to hold the radium tube in place, and the cannula is withdrawn. After having been left in situ for the proper length of time, the tubes are withdrawn by means of a silver wire to which they are attached. The puncture wounds heal within forty-eight hours after this, and the patients are able to be out of bed.

Radium in the Treatment of Sarcoma and Carcinoma.—G. J. Sciaroni (*Jour. Lab. and Clin. Med.*) states that radio-active substances (fifteen in the radium group and eleven in the thorium group) may be recognized by the following points: (1) their effect on sensitive photographic plates; (2) their ability to produce fluorescence; (3) their capability of ionizing on air; and (4) their production of heat. Their curative value is dependent on the rays that they emit. These rays are clasified into alpha, beta and gamma rays, the former having the least penetrating power. They are positively charged. The beta rays are negatively charged, and are more penetrating than the alpha. The gamma rays have an extraordinary power of penetration. Even an interposed human body will not intercept all of them. Radium has a general and a selective destructive action. The fact that it destroys tumor tissue, while leaving normal tissue between it and the neoplasm practically unscathed, is explained by the fact that the normal fluids of the body tend to protect the normal tissue, while they are not designed for the upkeep of tumor cells. The author concludes that radium is the most powerful destructive agency for tumors known, and will reduce many inoperable carcinomas to an operable condition, thus saving many lives that otherwise would be lost.

Treatment of Tuberculous Cervical Adenitis.—Abbott, of Springfield, Illinois, outlines briefly the course of the efferent lymphatics of the mouth, nose, ear and pharynx; and emphasizes that a knowledge of this anatomy will often serve to indicate the source of infection when a particular lymph node or chain of nodes of the neck displays tuberculous infection. In his opinion, radical surgical interference has been too often resorted to

in tuberculous cervical adenitis. With this condition present, medical attention should always be directed to the correction of any noticeable sources of irritation at the possible portals of entry. Surgical treatment may be valuable but only when the affected lymph nodes are included within the triangle of which the base is formed by a line continuous posteriorly and two fingers breadth below the angle of the mandible. After the nodes have broken down, and the deeper lymphatics have become involved and the boundaries of the triangle have been passed, surgical interference offers worse than a hopeless prognosis. Medical or physical therapy cures many cases and best results are obtained in children under ten years of age; yet early operation may prevent extension of the infection into deeper lymphatics with a later manifestation of pulmonary tuberculosis. Where surgical interference is not indicated, tuberculin is the therapeutic remedy of choice. No cases should be given up as hopeless until this treatment has been tried.—*American Review of Tuberculosis*, May, 1919.

Further Notes on Margosic Acid and its Salts and Observations on Their Clinical Use.—(Karuna K. Chatterji, Calcutta, *Indian Medical Journal*, 1918, vol. LIII, No. 10, p. 377.) The margosic acid and its salts the medical profession will find a powerful therapeutic agent which can be used in combating infections of diverse nature. The author has tried to ascertain its specific action in syphilis. In the cases reported it will be seen that the manifestations of the disease have cleared up rapidly. Regarding Wassermann reaction, it has been rendered negative in one case and it has remained so after a dose of provocative injection of galyl. In three other cases the Wassermann reaction has been considerably reduced. The effect seems to be more pronounced in tertiary lesions. This may be due to the fact that the margosates act best when there is a mixed infection of the spirochetes with some pyogenic organisms.—*The American Journal of Syphilis*, April, 1919.

Water Hemlock Poisoning.—Dr. Mary R. Stratton reports an epidemic of poisoning by the Cicuta Occidentalis, a poisonous plant found in numerous portions of Colorado and other western states. Its analogue in our pharmacea appears to be the Cicuta virosa. The first poisoning case by this plant was reported by Wepfer as far back as 1679. That writer noted the fact of the fluid condition of the blood in his case of poisoning. This lack of coagulation of the blood has been noted since and has been demonstrated during the experimental work on animals. The study of the writers of the past shows that this poison began with cramps or pains in the stomach and an effort at vomiting and bowel movements. Those who vomited were more apt to recover. Then followed the typical convulsions with a sudden stiffness and immobility of all the muscles of the body. Some called the convulsions tetanic or epileptiform. There was unconsciousness, frothing at the mouth, open rigid eyes and dilated pupils. Usually there was death by asphyxia in a convulsion within a short length of time after eating the root, or a quick recovery after the convulsions were over.

In the cases cited by Dr. Stratton the sickness began with acute cramp or severe pain in the stomach, with an inclination towards a bowel movement and vomiting. Mostly, the vomit was a clear frothy fluid. (Those who vomited the stomach contents were not sick.) They then became dazed

and fell wherever they were and went into the most frightful convulsions and unconsciousness.

The spasms were of a tonic character, accompanied by cyanosis and frothing at the mouth. The pupils were widely dilated, the eyes were rolled up and the head drawn backward when they went into the convulsions and they became rigid in that position. In the case of others, the eyes were bent downward and the head forward. The jaws became locked and it was impossible to give them anything by mouth. The legs were somewhat parted and partly flexed. The arms partly flexed and held from the body, the hands clenched and finger nails blue. The muscles of the whole body were rigid and hard. In those who had been in convulsions some time, the pulse was fast, irregular and weak. During the severe convulsions, the breathing was interfered with to such an extent that the face was blue and livid and one wondered if they might not die from suffocation. The external surface of the body was cold. There was no bowel action or urination during the convulsions. Once in a while the convulsions would relax, only to return.

Numerous cases of poisoning by this plant have been noted among animals. Autopsy findings in these were as follows: The left ventricle was contracted and the right dilated, while the walls of the heart were more or less congested. The most marked feature was the extreme congestion of the venous blood vessels. The lung, kidneys and membranes of the central nervous system showed strong congestion. The mucous membrane of the trachea and bronchi was inflamed, as were also the inner walls of the small intestine and stomach, and in some cases, other parts of the alimentary canal. In the kidneys the congestion was most marked in the cortex and was accompanied with some nephritis. It was noticed that the red blood corpuscles in the kidneys were more or less broken down. Death resulted from respiratory failure.

The article closes with a valuable bibliography to which those interested are referred.—*Colorado Medicine*, May, 1919.

Neurocirculatory Asthenia.—Carroll has made an extended study of the above subject and presents the following conclusions:

1. That some cases of hyperthyroidism are analogous to the entity neurocirculatory asthenia and their pathogenisis is probably identical, the phenomena being attributable to a hyperexcitability of the opposing sets of fibres of the autonomic nervous system.

2. That in both conditions the syndrome develops in individua ism when there is a hyperirritability of one or other sets of fibres in the autonomic system. Hence, constitutional predisposition due to inherited, sympathetic or vagotonic instability is a factor in the causation on a sound bas s

3. That nervous and emotional strain is the immediate cause, precipitating the syndrome in susceptible individuals.

4. That in the cause of susceptibility (acquired instability of the autonomic nervous system) infection plays a predominant role, the susceptibility in such cases may be accepted as indicating a chronicity of the infection with constant or frequent outpourings into the blood of the infective agent.

5. That there is a certain rationale for believing that this instability in the autonomic nervous system lies in the element of anaphylaxis in disease in the predilection of anaphylatoxin for the parasympathetic system.

6. That there is some evidence that deficiencies of calcium in the diet

may have played a part in the causation of some of the phenomena and that the higher plane of inorganic metabolism in the organism, may have shared with adrenin increase the responsibility in causation of the thyroid hyperlasis and hyperthyroidism among the soldiers.—*American Journal of the Medical Sciences*, July, 1919.

The Relation of Bacillus Influenza to the Recent Epidemic—McConnell, based upon studies in a laboratory at Camp Devens in Mass., presents the following summary of his work: It is first shown that although many observers found the bacillus influenza in cultures in quite a high percentage of cases examined, there were just as many equally skilful men who found the organism in a very small number of the cases cultured or did not find it at all.

It is evident, and recognized by all, that the serious symptoms were not due to the presence of the bacillus influenza, but were the result of invasion of secondary organisms, these being mainly pneumococci and streptococci.

Accompanying the disease was commonly a well marked leukopenia, which, however, did not occur when killed cultures of influenza bacilli were injected. In a series of about 158 individuals examined after such inoculations there was in fact, no alteration from the normal blood picture. The injection of these blood cultures did not appear either to prevent the disease, nor to ameliorate the condition after the injection had occurred

The inoculations of filtrates of sputum and bronchial secretions cannot be said to have caused the disease, nor has the infecting of the nasopharyngeal mucous membranes with recently isolated pure cultures of living influenza bacilli given rise to symptoms.

In view of the above findings it would seem that the evidence is not in favor of the influenza bacilli being considered the etiological factor in the recent epidemic.—*The American Journal of Medical Sciences*, July, 1919.

PEDIATRICS

Conducted by C. Sigmund Raue, M.D.

Influenza in Children.—La Fetra (*Amer. Jour. Med. Sciences*, June, 1919) in a review of cases of influenza in children which came under his observation and care found that pneumonia developed in only 10 per cent. of his series. The type was a broncho-pneumonia in the majority of instances (four-fifths of the cases). A peculiar feature of the broncho-pneumonia cases was the occurrence of an interstitial emphysema which was noted six times. It appeared first in the clavicular region and extended to the thorax, arms and down the trunk progressively; in one instance it extended to the thighs. Crepitation was distinctly to be elicited over the affected areas. La Fetra considers the development of this complication as a bad prognostic omen; five out of the six patients who developed the same died.

Appendicitis in Children.—Chas. E. Farr, in a contribution on appendicitis in children, from the *New York Hospital and St. Mary's Free Hospital for Children*, expresses the belief that the problem of the diagnosis is in many ways even more difficult than in adults. The difficulty of obtaining a direct history is one of the reasons for error. On the other hand, physical

examination is in some respects easier since the field is smaller and the probabilities fewer.

The frequency of appendicitis in children is underestimated. After one year of age it is not uncommon to see pathologic changes in the appendix. The mortality is higher than in adults; this is usually attributed to lessened resistance to infection and to more rapid development of necrosis and peritonitis. Early operation is urged as the only safe means of averting a fatal outcome. Farr closes his article with the following summary:

Appendicitis in children is probably much more common than is generally recognized.

The reason for the apparent higher mortality in children is that in general only the more serious cases are operated upon.

The progress of the disease is little, if any, more rapid in children than in adults.

Earlier diagnosis and operation would probably halve the mortality as it has done in adults.—*Archives of Pediatrics*, April, 1919.

Fat Absorption in Infancy.—The consideration of the quantity of "fat," in the form of either neutral fat, fatty acid or soap, in the stools of infants takes a prominent part in the clinic of diseases of childhood. There have been periods within the past few decades when the question of the digestion and absorption of fats in the alimentation of infancy has almost seemed, to those not solely concerned with problems of this sort, to receive an emphasis out of all proportion to its comparative significance. The starting point for the estimate of good, tolerable or deficient utilization of fats and the diagnosis of any disorders consequent on a disturbance of this function lies in a knowledge of what constitutes the normal condition in health. In the case of the adult, the statistics on this point are concordant and conclusive for a considerable number of fats of both animal and vegetable origin. Ninety-five per cent. or more of ingested fat ordinarily is absorbed, so that even when it is consumed in amounts above 100 gm. (3½ ounces) the utilization of fat may be regarded as excellent in the healthy person. These established findings are now supplemented by new statistics from breast fed infants in this country. Analyses made by Holt, Courtney and Fales (Holt, L. E., Courtney, A. M., and Fales, H. L.: *A Study of the Fat Metabolism of Infants and Young Children, I, Fat in the Stools of Breast Fed Infants, Am. J. Dis. Child. 17: 241, April, 1919*) of New York on the feces of thirty well nourished infants who were gaining normally shows a range of fat absorption of from 90 to 99 per cent. of the intake. The fat of the stools averaged 34.5 per cent. of the dried weight, and frequently was as high as 50 per cent. About one-third was in the form of soaps. In absolute amounts, the daily fecal excretion of fatty material rarely exceeded 2 gm., and was sometimes less than 0.5 gm. Here, then, is another illustration of the danger of thinking in terms of percentage composition when small quantities are involved. A stool may be half fat, and yet that half may amount to only a gram or two in absolute quantity, when little alimentary residue appears as feces. According to the New York investigators, no constant relation was shown between the percentage of fat in the mother's milk and the percentage of total fat in the stool.—*Jour. Amer. Med. Association.*

Report of Throat Cultures in Measles.—(Knowlton, *Jour. A.M.A.*, Vol. 72, No. 21) Routine cultures were made for the purpose of isolating those cases harboring the hemolytic streptococcus. 458 cases of measles were studied and cultures were taken from post nasal space and grown on blood agar. Of chief interest is the relation of the throat organism to the principal complications—pneumonia and otitis media. Pharyngitis and laryngitis and bronchitis were considered not as complications but as part of the disease. Tonsillitis occurred not infrequently but it is a complication as at times it developed after the patient was convalescent. There were 43 cases of suppurative otitis media from which developed five cases of mastoiditis. There were three frontal sinus infections and two peritonsillar abscesses.

Of 122 cases positive for the hemolytic streptococcus, 13 developed pneumonia and 11 otitis media. Of 336 cases negative to hemolytic streptococci, 35 developed pneumonia and 33 cases otitis media. The percentage in both instances was practically the same.

Cerebral Hemorrhage of the Newborn.—Warwick, working in the Department of Pathology, University of Minnesota, presents the following summary of her studies:

1. Cerebral hemorrhage of the newborn is frequently found, occurring in 56% of 36 deaths of young infants at the University Hospital.
2. The condition is brought about by trauma in normal or rapid deliveries, by congestion or asphyxiation in slow deliveries or in disease in the child itself.
3. The so-called "hemorrhagic disease of the newborn" is a much neglected but very important cause of cerebral hemorrhage in infants, occurring in 44% of the deaths of our series.
4. Forceps deliveries, advanced age of the primapara mother and syphilis probably do not play as important a role ln the etiology of this condition as was formerly supposed.
5. More careful and complete routine autopsies on newborn infants as well as more accurate observations on the conditions of the mothers and circumstances of the birth are needed as a foundation for further studies.

UROLOGY

Conducted by L. T. Ashcraft, M. D.

Prostatectomy.—F. Stewart, (*Illinois Med. Jour.*, xxxiv, 263) lays stress on the importance of a thorough preparation for operation and upon the necessity for careful and painstaking after-treatment. A careful determination of the patient's condition before operation will serve as a guide in regard to the character of the mouth and preliminary treatment required. The author believes in the two stage operation as being safer and better for the patient. He insists upon personal supervision of the details and after-treatment. He controls hemorrhage, which he considers to be the greatest danger, by packing, or by the use of one of the bags devised for this purpose.

Value of Eosinophilia in the Diagnosis of Surgical Affections of the Prostate.—Morel and Chabanier having found that an eosinophilia exists in cases of adenoma of the prostate, Legueu and Morel (*Archives Urologiques*) made investigations on the subject in order to see whether this knowl-

edge could not be applied to the blood of prostatic patients as a clinical test. They made a study of eighty-five cases of different forms of disease of the prostate, from which they drew the following conclusions:

1. Hypereosinophilia clearly exists in adenoma.
2. Hypereosinophilia seems to be a feature in cancer.
3. Examination of the leukocytic formula often permits of a confirmation of the clinical diagnosis of prostatic adenoma.
4. Examination of the leukocytic formula almost always permits of a confirmation or a rectification of the clinical diagnosis of prostatic carcinoma.

The Silent Prostate,—J. A. Gardner, (*Jour. Amer. Med. Asso.*, lxxi., 1636) points out the fact that the real danger of the obstruction to the outflow of urine consists in the back pressure produced upon the kidneys. These organs are generally infected, sooner or later. After drainage is established, the renal function usually recovers itself. If infection is present, the patient usually acquires an immunity to further infection; and this is a factor in his favor. The author has done one hundred and twelve consecutive two-stage operations without a single death. He goes into detail regarding the operative procedure. He considers that a good nurse, who is familiar with the method of handling these cases, is a great adjunct. In a recent examination of the operative report of twenty-six representative general hospitals in Pennsylvania and other States, Thomas found a mortality of 22.5 per cent. as the result of one hundred and forty-eight prostatectomies made during the year. This was in startling contrast with the mortality rate of 4.3 per cent. for one thousand three hundred and seventy-five prostatectomies done by eight of the world's foremost genito-urinary surgeons. Young has reported a series of a hundred and forty-eight prostatectomies without a death, and the author has done one hundred and twelve unselected cases with no mortality.

Perineal Prostatectomy.—J. Crawford (*Jour. Ia. State Med. Soc.*, viii, 355) considers the preliminary treatment as important as the operation, the main thing being drainage through an in-lying catheter, or by catheterization three or four times daily. The phenolsulphonephthalein test should be employed for the purpose of testing the kidney function. The use of free catharsis with plenty of sodium bicarbonate at this time will aid in preventing uremia and acidosis subsequent to the surgical procedure. The cystoscope should be used to reveal the character and location of the obstruction, as well as the existence of a diverticulum of the bladder.

The author prefers nitrous oxide and oxygen to ether as the anesthetic for this operation, although he has employed both. He follows the technique of Young in enucleating the prostate. The insertion of drainage tubes, a tag of gauze being packed in each side of the prostatic capsule, finishes the procedure. The author lays particular stress upon the fact that this is an extra-urethral operation, and not an intra-urethral one. Being done within plain sight, it is exact and definite. The liability to shock is lessened by the absence of great trauma and the trifling hemorrhage.

The drainage tubes are left in place for twenty-four hours, the bladder being irrigated sufficiently to keep it free from blood clots. Then the tubes and the packing are removed. The wound closes gradually, and by the tenth day, usually, urination is performed partly through the urethra. Should

epididymitis occur, as it sometimes does in cases in which it has occurred previous to the operation, it may be relieved within a few days by the use of ice. The author does not consider cases of small fibrous obstruction that have been treated by means of the urethral punch as suitable for the performance of perineal prostatectomy. He cites a good many cases in which good results have been obtained from the use of this method. Neither incontinence nor stricture has occurred as a sequel to this operation. Any tendency to urgency and frequency that may arise is controlled by hydraulic dilatation of the bladder, with exercise of the sphincters by stopping and starting the stream of urine.

Management of Prostatic Disease.—A. Stewart (*Interstate Medical Journal*) states that the most important points in the treatment of such cases are the exact determination of the patient's condition, the pre-operative and post-operative treatment, the type of anesthesia employed, and the operative technique. The mortality from surgical interference has now been reduced to five per cent., provided that the operation is not delayed too long. His conclusions are based upon an experience with fifty-three cases. In cases in which the bladder has for a long time been over-distended, there is danger attending the sudden removal of the urine. To overcome this, when performing a cystotomy, a tube is inserted and a pursestring suture is tied around it. A clamp is then put on the tube, and the urine is drawn off at stated intervals, so that the bladder never becomes entirely empty. The bladder pressure is thus maintained, and its capacity gradually reduced. By this means, the renal secretion is not jeopardized; and the author thinks that many lives have been saved by the use of this method, by which the occurrence of uremia is prevented. The entire process usually requires three days. Another precaution that he takes is to catheterize the patients for forty-eight hours before the operation, removing only a few ounces at a time, and injecting an ounce of ten per cent. argyrol. The method of operation that Stewart prefers is the intra-urethral enucleation of Squier.

Gonorrheal Empyema.—H. S. Woodbery (*Surg., Gyn. & Obstet.*, Jan., 1919) reports a case of this very rare condition in a girl of eight years. Upon admission to the hospital, she was suffering from abdominal distention that had lasted for five days, and had a temperature of 103.4 F. and a leukocyte count of 28,000. The abdomen was opened, in the belief that it was a case of general peritonitis due to rupture of the appendix. No perforation of the appendix was discovered, however. Six days later, right-sided pneumonia and pleurisy developed. Thick, yellow pus aspirated from the pleural cavity and obtained by resecting a rib contained a microorganism corresponding in every way to the gonococcus, although it could not be cultivated. A vaginal discharge, discovered two days after the abdominal operation, had contained gonococci. The patient died twelve hours after the resection of the rib, and no autopsy was obtained; but it was thought that the gonococcus must have been responsible for the abdominal symptoms and also for the pneumonia and pleurisy.

Provocative Injections of Gonococcus Vaccine.—Gerald H. Pearson (*Journal of Urology*, Dec., 1918) states that he has employed injections of gonococcus vaccine as a test for the presence of inactive gonococci in one hundred cases, and has found it reliable in ninety-six. He gives two injections

on successive days, the first consisting of three million gonococci of different strains, followed by massage of the seminal vesicles, prostate and Cowper's glands. The patient is instructed to avoid urinating from midnight until the following morning, when a smear is taken of any urethral exudate present. A dose of five million dead gonococci is then injected, and smears are taken for four mornings subsequently. None of the patients in whom negative findings were obtained by Pearson developed any recurrence. He thinks that these injections will be of value in differentiating between specific and nonspecific urethritis, besides affording evidence as to the cure of cases of gonorrhea.

The Surgical Treatment of Gonorrheal Epididymitis.—M. E. Bland, (*Jour. Urol.*, 1918, II, 321), has used the following operation with success in fourteen cases:

An incision half an inch long is made through the scrotal wall and the tunica vaginalis immediately over the swollen area, allowing the exudate to escape. If this exudate is serous, he closes the incision with one silkworm gut suture, leaving one or two strands for drainage. This is removed in twenty-four hours. If, on the other hand, the exudate is purulent, the incision is packed with a small strip of plain gauze, and the wound allowed to heal by granulation. The patient is usually able to resume his duties within a few days, after which the urethritis is treated. In the author's fourteen cases, the average number of days in the hospital was two and a half.

Seminal Vesiculotomy in the Diagnosis of Gonorrheal Rheumatism.—J. R. Dillon (*California State Journal of Medicine*, xvi., 485), from a study of ten cases of seminal vesiculotomy, in which there were frankly Neisserian histories with arthritis and other systemic manifestations, dependent upon focal infections in these organs, which could not be overcome by the usual non-operative method of treatment, finds that seminal vesiculotomy is justified and indicated in cases of gonorrheal arthritis which have failed to show a reasonable degree of improvement after the acute and sub-acute urethral condition has cleared up by the usual methods of treatment. In five cases, no improvement in the sexual function was noted. The bacteriological etiology was rather indefinite and unsatisfactory. The clinical results of the operation were satisfactory, and were much appreciated by the patient.

The Treatment of Genital Tuberculosis in the Male.—W. C. Quinby, (*Jour. Amer. Med. Asso.*, lxxi, 1790) says that in tuberculosis of the male genitalia, exact knowledge is lacking as to which structure is primarily involved. The majority of authors hold that the epididymis is the first structure attacked, while a smaller number think that the disease in the genitals begins in the prostate. Evidence gleaned from necropsy findings and clinical examination of the prostate and vesicle show that in the majority of cases the tuberculosis involves the whole genital tract. The author believes that final conclusive evidence must be looked for in the "pathology of the living." As a contribution to this, he details the histories of seven cases in which the entire tract was removed on one side, employing the technique described by Young. The evidence obtained from this small series of cases shows that in no case were the structures central to the epididymis found to be free from tuberculosis. In another interesting case that came under his observation, the tuberculous process was found to be confined to

the prostate, the epididymis showing no involvement. In these seven cases, rectal examination showed that both the prostate and vesicle were involved in two cases; the vesicle only, in three cases; while in two, the examination was entirely negative. Six of the patients were clinically cured.

Extravasation of Urine.—W. E. Keane, (*J. Mich. St. M. Soc.*, xvii, 429), believes that extravasation of urine does its damage, as a rule, by pressure and mechanical irritation. This is followed by infection and necrosis and the symptoms of sepsis may not appear until several days, or even weeks, after the injury. He thinks that if the patients are seen early and the tear located, it should be repaired at once, if the urine is uninfected. Particular care should be taken to clean out what urine has escaped to the surrounding tissues. Guttapercha drainage should be left in from two to three days. If the urethra is torn, an external urethrotomy should be done, and an inlying catheter be left *in situ* for three or four days. If sepsis is already present, complete drainage of the damaged and gangrenous tissue must be instituted. In strictured patients with partial retention who show symptoms of sudden complete retention, accompanied with rapid swelling of the perineum and scrotum, care must be taken to inspect the perineum carefully. If suprapubic aspiration is necessary, a very small calibered needle should be employed; and within a few hours afterwards a radical operation for drainage of the bladder should be done. The tissue should be squeezed free of all pus, and washed with 1: 5000 weak bichloride solution, and the necrotic tissues excised.

Diverticula of the Bladder.—E. S. Judd, (*Annals of Surgery*, Philadelphia, LXVIII, 298), states that this condition occurs almost exclusively in males. He believes that it is nearly always congenital in origin, and is not due to an obstructing enlargement of the prostate. The opening of the diverticulum is usually near the ureteral orifice. The condition is characterized by the sensation that the bladder is not emptying, felt immediately after voiding, the patient being able to repeat the act of micturition and pass a considerable amount of urine the second time.

In most of the author's cases, there were present frequency and difficulty of urination, with a burning sensation. The escape of a large amount of urine containing a great deal of pus at a time when the bladder was supposed to be quite clean is almost pathognomonic of a diverticulum.

The clinical features may suggest the diagnosis, but the accurate determination of the condition present is dependent upon the use of the cystoscope with the employment of the leaded catheter, and the X-ray. The making of a cystogram is valuable in obscure cases. Even when the opening of the diverticulum into the bladder is very small, colloidal silver will pass through it, and can be seen in the roentgenogram.

Judd's report is based upon 44 cases in which operation was performed between 1908 and 1918. They were all in males, aged from eighteen to seventy-three years. He considers excision of the diverticular sac the only method of treatment that is successful. A large opening is made into the bladder through the perivesical space, and all the pus and mucus cleared away. The prevesical tissue must be protected from infection during this process. The opening of the diverticulum is located; and, whenever possible, one or two fingers are passed into the diverticulum. Then the dissection is made through the prevesical tissues down to the sac, which is being lifted by means of the

fingers within it. The sac having been freed from the fatty tissue surrounding it, its neck is severed. The opening in the bladder is ligated, and a drain is placed in the space formerly occupied by the sac. The suprapubic wound is closed, with the exception of the place for the drainage tube.

The Radical Operation for Teratoma Testes.—*Sur. Gyn. Obs.*, May 1919. Report of five cases by Frank Hinman, San Francisco, who thinks that the radical operation for teratoma testes is justified in suitable cases by the high mortality following simple castration; by the definite experimental and surgical demarcation of the primary lymph zone, and by the possibility of the clean and complete removal of this zone.

The radical operation is neither technically difficult, dangerous nor mutilating, as is proven by the fact that it has been successfully performed and the primary lymph zone completely removed in five cases of teratoma testes without a single troublesome operative or post-operative complication.

These five surgical successes indicate that the mortality from this seemingly extensive operation should be little if any greater than that following castration. The ultimate result in these five cases cannot be known for years but the finding in four cases of metastatic tumor tissue in the lymph areas radically removed demonstrates the uselessness of simple castration and the necessity of radical surgery.

Operative Treatment of Undescended or Mal-descending Testis with Especial Reference to End-Results.—*Sur. Gyn. Obs.*, May, 1919. Report of 415 cases by William B. Coley, New York. He concludes that the etiology points to a congenital origin often influenced by the element of heredity and frequently associated with other developmental defects. The change in structure and the atrophy due to congenital causes. The undescended or mal-descended testis with marked atrophy has little or no functional value. In a considerable number of cases spermatogenesis is retained. The undescended testis shows a greater tendency than the normal testis to malignant degeneration. He believes that the undescended testis is probably of functional value in not more than 10 per cent. of the cases but should not be removed in children because it is of great value in developing the male characteristics of the child and promoting general health. In the adult it should likewise be retained for its influence upon the mentality and for the moral effect if for no other reason.

OTOLOGY AND LARYNGOLOGY

By J. V. F. Clay, M.D.

Tonsillectomy in Myositis and Arthritis.—Lille and Lyons, *Jour. A. M. A.*, Vol. 72, No. 17.) A critical study was made of 200 cases of myositis and arthritis which had been tonsillectomized. Their observations lead to the conclusions that every case of myositis or arthritis should have the tonsil removed, since 75% of all cases showed a marked improvement. The duration of the myositis or arthritis is a factor in the ultimate result. They found even the very old cases were markedly benefited although the more recent cases yielded most brilliant results. Forty per cent. of the invalided cases responded favorably. A tonsil history is not always obtainable in these cases. A focus may be active without local signs. They emphasize the necessity for a clean, thorough removal of the organ.

Changing Methods and Advances in the Treatment of Progressive Deafness Following Hyperplastic Otitis Media.—(F. P. Emerson, *Annal., Otol., Rhinol.*, Dec. 1918.) In discussing the etiology of this the author suggests as the most prominent factor adenoids and secondly, the acute infectious diseases and la Grippe. These infectious diseases leave a streptococcus focus which is chronic, and subject to acute exacerbations which produce a symptom complex, confused with acute rhinitis. This acute lighting up of the focus produces sub acute catarrhal otitis media. The obstructive nasal and naso-pharyngeal lesions act only because of impaired drainage and favor the chronic infection. The secretory changes he believes to be due to a toxin. He cites cases showing hypertrophic changes succeeded by secondary nerve degeneration. He emphasizes the fact that very early in hyperplastic catarrh beginning auditory nerve degeneration may be present without marked lowering of the bone conduction as well as changes in the tympanum.

Diseased Faucial Tonsils; Their Toxic, Infectious and Reflex Effects.—(J. L. Davis, *Annal., Otol., Rhinol. & Laryng.*, Dec. 1918.) Davis believes that investigation of the toxic absorption and transmission, in which the chemist's aid is summoned, will yield interesting data. He believes the poison of putrefaction in diseased tonsils to have a very direct action upon the liver or its biliary secretions ultimately producing intestinal auto-intoxication with its train of symptoms. Through this process diseased tonsils are a common cause of cold in the head, bilious headache, intestinal indigestion, appendicitis and cardiac arythmia, all through toxic influence. He believes that the majority of tonsils are diseased and that everyone whose tonsils are in any measure diseased would be healthier, stronger and happier without them.

Optic Neuritis with Hypothyroidism.—(*Semna Medica Abs. J.A.M.A.*, Vol. 7, No. 20.) The neuritis was bilateral in a woman of 24 with signs of mild, chronic thyroid insufficiency during the last seven years except during her three pregnancies. Three months after her last two pregnancies vision became impaired. By exclusion the optic neuritis was ascribed to the thyroid insufficiency and thyroid treatment instituted. Vision improved under it but dropped each time the thyroid was suspended. There was a family tendency to obesity and the visual disturbance was probably due to some upset in the endocrine glands. The thyroid treatment aided in restoring the balance to a certain extent and a visual acuity of 1-3 was regained but dropped to 1-6 every time the thyroid treatment was suspended for five days.

A Study of Acute Mastoiditis at Fort Riley, Kansas.—(Scott, *Jour. A. M. A.*, Vol. 72, No. 16.) Mastoiditis, because of the large number of cases, the long convalesence and the tendency toward imaginary, if not real, weakness for long periods, has become an important factor in the ineffective list in army camps. The close post operative care calls for painstaking work on the part of the medical officers. Epidemic mumps, measles, scarlet fever, diphtheria, meningitis, and almost universal tonsillitis, all acted in the development of this disease. These authors speak of locality infection. A certain organism is found to predominate in a given locality and found to be the active agent in pneumonia, tonsil infections and mastoiditis. A hemoiytic streptococcus may be the organism in one locality and the S. viri-

dans in another locality. They become virulent for a period, then latent until awakened by an epidemic of tonsillitis, measles, scarlet fever or influenza; then the organism assumes the role of secondary invaders and becomes active in the complications. The tonsil is felt to be the temporary abode of the germ of locality infection; occasionally they rest in the nasal accessory cavities.

Considerable emphasis is expressed upon the importance of Rœntgenoscopy and in certain language they insist upon the necessity for nicety in technique. To quote: "The technique must be perfected with each machine. The clinician must study the finished plate with the Rœntgenologist. Both mastoids must be studied. When a new make of plate is used the technique must be revised. One person should take all exposures of a single mastoid."

Variation in the structure of the mastoid will modify the course of the disease: (1) rudimentary type, with practically no cells, here infection will subside without operation. (2) Cellular type, large cells and (3) many small cells extending into the zygoma and into the tip.

Under symptomatology the authors divide the cases into three classes: (1) Cases in which the otitis media symptoms predominate and mastoid involvement is slight. These usually belong to the rudimentary type. (2) Cases in which the otitis media and mastoiditis appear at one time. These are usually serious. (3) Cases occurring in systemic infections, fulminating destruction in the mastoid with little local evidence. This is probably blood stream infection. The management of a case of mastoiditis depends entirely upon the individual indications of the case. Mastoiditis cannot be classified and treated according to clinical symptoms. There can be no set rules, for some cases require early, others late operations, depending upon circumstances of the individual case.

Studies in Streptococcic Infection at Camp Custer, Mich.—Blanton, *Jour. A.M.A.*, Vol. 72, No. 21.) In discussing the localization of streptococci these investigators have rarely found the streptococcus in the nose, but recovered them in a number of cases from the posterior pharyngeal wall and sputum. They regard the tonsil as the habitat of the organism. Cultures from the tonsils of apparently healthy persons and not exposed to persons ill with streptococcic infections have exhibited hemolytic streptococci in 90% of cases. On the other hand the organisms were only occasionally found in the throat of those who had been tonsillectomized. In cases where it was found, portions of remaining tonsil tissue were found. Hemolytic streptococci have been recovered from the depths of 80% of tonsils examined after operative removal.

Speaking of mastoids in this epidemic they state that a number of streptococcic mastoid infections have occurred and pursued a stormy course. Eighty cases came to operation and 13% resulted fatally. Two cases were complicated by septic sinus thrombosis. Two cases developed meningitis and two brain abscess.

Hospital Epidemic of Streptococcic Sore Throat with Surgical Complications.—(Keegan, *Jour. A. M. A.*, Vol. 72, No. 20.) Numerous instances of post operative infection of clean surgical cases in the U. S. N. Hospital at Chelsea called attention to this epidemic. Simultaneously, in the general surgical and nose and throat wards, clean surgical cases developed post operative temperature with sore throat and subsequently a suppuration of the wound, from which a hemolytic streptococcus was isolated. Operating

room and ward infection were eliminated by careful investigation. The distribution was finally localized in wards related to acute throat wards and general surgical wards where undetermined cases were placed. The author was able in every case to isolate a hemolytic streptococcus of unusual cultural characteristics and differing from the hemolytic streptococcus isolated in cases of bronchitis and broncho-pneumonia in the hospital at the time of the epidemic. Interesting in this connection is the fact that none of the cases of septic sore throat developed as complications, bronchitis or broncho-pneumonia. Cervical and sub-maxillary adenitis was the most frequent complication. Middle ear and mastoid infection occurred in six cases and facial erysipelas in three. Acute arthritis was observed in a few cases. Relapse was common. Control of the epidemic was accomplished by suspending all operating for three weeks and the exclusion from the surgical service of all carriers of the hemolytic streptococcus.

Biologic Treatment of Ozena.—(*Deutsche Med. Wochen., Jour. A. M. A.*, Abs. Vol. 72, No. 20.) Whittmack ascribes ozena to a lack of normal ciliary movement which has been lost by inflammatory process, and the physiologic cleansing mechanism destroyed. To remedy this he diverted the outlet of the parotid gland into the maxillary sinus so that the saliva passed from this sinus into the nose, thus laving the nasal mucosa constantly. As soon as this occurs the ozena begins to subside without any other treatment and is soon completely cured. The drawback to this method is that during chewing the flow of saliva is so profuse that some may drip from the nose. The patients have to choose between this and the ozena and all his five patients have been more than satisfied with the outcome, especially as the secretion of saliva seems to grow less with time. The ozena in each case had resisted all kinds of treatment for years.

Streptococcus Hemolyticus in War Wounds.—*Jour. A. M. A.*, March 15, 1919. By Allen H. Bunce, Capt. M. C., U. S. A. In a series of 1848 cultures made on 985 consecutive war wounds he found streptococcus hemolyticus in twenty-four per cent. of the wounds. There is nothing characteristic about the appearance of the wound. The presence of the organism is the chief cause of failure of the secondary suture. Therefore no wound so infected should be closed. Dakin's solution is of value in clearing up these wounds but its action is much slower than in wounds where the streptococcus hemolyticus is absent.

Unilateral Anaesthesia of the Cornea and Conjunctiva. A Diagnostic Sign of Coma due to Hemoplegia.—(Freidman, *Jour. A.M.A.*, Vol. 72, No. 25.) The author offers this sign as a valuable diagnostic differentiating sign in cases of coma. It is elicited by carefully passing a small blunt object along the conjunctiva to the corneal margin. One must guard against reaching the pupillary area because of the possibility of eliciting a visual reflex which is present even in moderately stuporous cases. He has found this reflex absent in practically all hemiplegias with and without coma. It is observed on the side of the hemiplegia, that is, the side opposite the lesion. He has not had occasion to study the sign in cases of crossed hemiplegia.

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A FEW REMARKS ON THE INTER-RELATION OF THE THYROID BODY AND THE OTHER ENDOCRINOUS GLANDS.

BY

WM. G. HERRMAN, M.D., ASBURY PARK, N. J.

In the field of medicine there is at the present time no subject that is so promising in its potential value, so spectacular in some of its phases and yet so little understood, not only by the general run of the profession, but even by those who are actively engaged in research, as that of internal secretion. Yet with all its appearance of a new discovery in some of its aspects the central idea involved is very old. Sus Ruta, 400-500 B. C., speaks of the use of orchitic substance for impotence. Pliny and Galen write of the employment of animal preparations in the treatment of disease. Hippocrates considered the body made up of "humours," the balance of which meant health, and the means of restoring health lay in corresponding healthy organs of animals. Indeed the idea of savages in drinking the blood or eating the hearts of their enemies, to add the courage of the deceased to their own, embodies the same general principle.

The subject is one of immense importance to us as homœopaths. Vaccine therapy, the principles of immunity and organotherapy should be heralded by the initiated as distinctly homœopathic. The law is the same; we who have been trained in the law should take the leadership in the work that must be done and not sit back satisfied with the armamentarium that Hahnemann, Hering and a few other of our intellectual giants have given us. No less an authority on the

subject of organotherapy than Harrower plainly says: "The principles of 'Similia, similibus curentur,' which is the basis of Hahnemann's system of homœopathy, has a likeness to the principles of organotherapy." . . . Other authorities bear witness to this with startling clearness but they do not give credit to the principles of homœopathy publicly.

There are in the body certain glandular structures with an abundant blood supply which have no ducts. The absence of these, their underdevelopment or disease specifically alters or affects the structure or physiology of other organs or the body as a whole. In addition there are other glandular structures which have been found to exert an influence other than that affected through their regular ductal secretion. These organs must exert their influence through the blood stream, for if their arterial connection be severed they are first impotent, and then atrophy. Since they act through the blood stream as a medium they must pour something into it. Physiological chemists have hunted long and hard for the chemical substances involved. Physiologists have been content to demonstrate that something in the nature of a secretion is present and have called that something a "hormone." The sum total of the chemists' findings is as follows: "Since in the normal functioning of the body they (the hormones) have to be discharged at frequent intervals into the blood stream and carried onward by this to the organ on which they exercise their specific effect, they can not belong to that class of complex bodies which include the toxins of animal or vegetable origin. We must therefore conceive the latter substances, produced often in normal metabolism of certain cells, of definite chemical composition and comparable in their chemical nature and mode of action to drugs of specific action such as the alkaloids. Furthermore, they, *i. e.*, the active principles of endocrinous secretions, are thermo-stable and non-antigenic when placed in the human body and hence are probably crystaloid in contradistinction to ferments or enzymes, which are colloidal."

There is in the body in all its various functions a nice balance maintained in health. This is essential to cellular and systemic activity. It is this equilibrium that nourishes us through the isotonic fluids, that gives us oxygen through the pressure of the gases, that enables us to move our muscles, gracefully, powerfully and at will, and that enables us to move

or keep still through nervous stimuli or inhibitions. What is more plausible, therefore, than that the endocrinous bodies may be so inter-related that they are self-regulating! The most important function of the hormones is the maintenance of cellular activity. Just how this force is exerted is as yet little understood but we can accept as a fact that they are of more importance than the trophic nerves. Some authorities believe that the hormone balance has a great deal to do with the susceptibility to disease, for this equilibrium mentioned above is called the "hormone balance" when the endocrinous glands are referred to. There is no other gland so intimately related to numerous hormone producing glands as the thyroid. Clinical and experimental findings showing how complex are its lines of communication have led Harrower to speak of "the thyroid control of the hormone balance."

The evidence as to the exact relation of the thyroid and the parathyroid glands is conflicting. H. H. Dale claims that they are independent in action yet somewhat antagonistic. Vasale and Gerrevali found that the removal of all the parathyroids with preservation of the thyroid caused tetany. This Gly showed could be relieved by the exhibition of thyroid glandular extract but not by large doses of parathyroid. When the thyroid is removed the remaining parathyroids hypertrophy and may contain colloidal substance. Vincent and co-workers believe with Gly that parathyroids are partly developed and potentially functional nodules of thyroid tissue. Sajous says that they act jointly, which is also Harrower's idea. Jeandilize writes that while thyroids promote metabolism, parathyroids co-operate with them only in that they render innocuous toxic by-products of metabolic activity. Mousson suggests that the thyroid has trophic properties and the parathyroid antitoxic. Biedl writes: "I have found in numerous cases that the removal of the thyroid together with the internal parathyroids is nearly always followed by hypertrophy of the external parathyroids." Rudinger, according to Harrower, gives the most reasonable explanation. He concluded that: (1) thyroidectomy is followed by parathyroid hypertrophy but (2) that manifestations of hyperthyroidism are diminished by parathyroid exhibition while hypothyroidism is made worse; (3) tetany follows thyroidectomy but the effects are less marked than those following parathyroidectomy, and (4) finally parathyroidectomy is followed by a

degree of thyroid hypertrophy. In short the reports are conflicting, in one case they seem to antagonize and on the other to act vicariously for one another. Perhaps the most suggestive idea is that the internal and external parathyroids are not one and the same thing but that the external parathyroids are potential thyroids while the internal parathyroids are antagonistic glands and that when the feeding of thyroid extract for tetany has been of benefit, the internal parathyroids were included in the preparation of the extract, for they are hard to remove from the thyroid itself, while the treatment with parathyroid extract, so-called, consisted only of the external glands.

The hypophysis cerebri seems to act in the role of chivalrous foe to the thyroid, inhibiting it while both are functioning normally but hypertrophying and acting vicariously for it when the thyroid is removed. At autopsies in cases of myxoedema the pituitary has been found greatly hypertrophied. Rogowitsch advances the theory of vicarious functioning, claiming that the pituitary hypertrophies after thyroidal extirpation and forms colloidal substance. On the other hand Mascey reports negative results in using pituitary extract for thyroid insufficiency. According to Hoskins the posterior lobe secretes the active substance and has a stimulating effect on the thyroid. Lucieu and Pausot obtained hypertrophy in thyroids resembling simple goitre in 10-40 per cent. of their cases when giving pituitary extract. On the other hand Cushing found acute hypertrophy of the thyroid after hypophysectomy. Exner studied Hochnegg's surgical cases in which pituitary was extirpated for acromegally and found undoubted hypertrophy of the thyroid. The results are inconclusive.

In their relation to the sexual organs, the thyroid and the thymus seem to be distinctly antagonistic. Thymectomy in male guinea pigs is followed by rapid development of the gonads while thyroidectomy is followed by atrophy, and Sajous is emphatic in the statement that they are antagonistic. Harrower reports that Mme. Dor, of Lyons, and Hirsch have found that thymus extract gives good results in lessening cardiac disturbances, in reducing exophthalmus, and in regression of struma in Graves' disease.

The adrenals and the thyroid are friends in good standing, having formed a protective and defensive alliance. The

adrenals help to oxidate substances exogenous and endogenous. Sajous reports that the thyroid takes an active part indirectly in general immunity by increasing functional oxidation of the adrenals and through these organs general oxidation and metabolism and that it is the resulting increase of functional activity in these organs which produces protective substances and correspondingly augments in the blood the quantity of these substances known as Buchorer's alexins. This was confirmed by Miss Louise Fassin at the Bacteriological Institute of Liege, also by Stepanoff and M. Marbie. Frankel found that in Graves' disease the amount of adrenaline in the blood is increased several hundred per cent. Eppinger and Rudinger and Falta performed numerous experiments involving excision of the thyroid and pancreas, and have found that the thyroid and adrenals mutually stimulate each other and antagonize the pancreas. Bomet found hypertrophy of the thyroid in 12 out of 50 cases after extirpation of the adrenals. Possibly this was compensatory. Parker and Goldstein noted augmentation of colloid in the thyroids after adrenalin treatment. The thyroids then may reasonably be considered to aid in the oxidation of the body; they will produce a rise of temperature upon injection as Crile found in advancing his "Kinetic theory" and they augment each one's antagonism to the pancreas.

What is this antagonism to the pancreas? The cell islands of Langerhans secrete a hormone that regulates the carbohydrate metabolism. During the hyperthyroidism glycosuria is easily obtained but in hypothyroidism large quantities of sugar can be taken care of by the body. Leopold Levi reports hyper function of the pancreas with thyroid insufficiency. The evidence seems to be conclusive that the pancreas and the thyroid balance one another and that the balance has much to do with the production of diabetes and Graves' disease.

Perhaps the greatest field of influence after all lies in the gonads. Myxoedoema or hypothyroidism produces in men imperfect development of the sexual organs, diminution of the sexual appetite and impotence; in women, ovarian instability, premature puberty, amennorrhoea, tardiness and insufficiency or suspended menstruation. These symptoms and conditions have at times all been cleared up by using thyroid extract. Rogers believes that disturbances of menstruation with larger tender ovaries always occur in Basedowe's dis-

ease. Mamaberg reverses this view of cause and effect and says that the ovaries at times produce a secretion that stimulates goitre and that Rœntgen rays dry up this substance and in a series of ten cases favorable influence, except as regards a decrease in the size of the gland, was obtained in every case. H. H. Dale reports that the thyroid swells at every menstrual period, after defloration and during pregnancy, and further points out that Graves' disease occurs much more frequently in women between puberty and the climacteric than at any other time. Leopold Levi asserts that the thyroid stimulates and controls the ovaries and testicles, that it is antagonistic to the menses and that it has an influence on the mammary secretion.

In conclusion it is hardly necessary to state that the subject of co-relation of the endocrinous glands is as yet mainly one of speculation. For this very reason it is of peculiar interest to Homœopaths for the homœopathic law and the knowledge that homœopaths have of drug action may be of the greatest aid in explaining the diametrically opposite results that various experimenters have obtained. Leonard Williams, emphasizing the use of small doses in thyroid therapy, says: "the peculiar principle is quite established in my mind that you can produce symptoms of thyroid insufficiency by overdoses of thyroid extract." It may well be that a scientific worker to whom the above observation is not peculiar will find the key to the riddle of contradictions and that potentized glandular extracts given homœopathically to the condition involved will place organotherapy upon a standard practical plane.

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Asbury Park, N. J.

THE NEURASTHENIC AND THE DIAGNOSTICIAN.

BY

WM. RENDELL WILLIAMS, M.D., PHILADELPHIA.

(Read before the Tri-County Medical Society, June 10, 1919.)

Some years ago, when I was a callow young doctor, fresh from an interneship in a busy hospital, where we saw none but the really sick, I undertook to hold down the large practice of a dear old physician who, in addition to much sound clinical judgment, had many of those gentle and sympathetic qualities of that famous physician made immortal by Ian McLaren in his story of "A Doctor of the Old School."

Amongst his patients, I found an over large percentage of lachrymose females, and a few males, who had been in the habit of consuming his time and vitality with frequent consultations, wherein they would weep copiously on his shirt front, be mentally consoled, and comforted, and depart happy, with a precious bottle of pills.

Needless to say, I was a dismal failure in handling this branch of the practice. After I had lined up and carefully examined those of them who would submit to the ordeal and proven to my own satisfaction that they were physically, if not mentally sound, it was impressed upon me by the cessation of their visits, that I had cruelly disturbed their enjoyment of their ill health, and found out later that they had sought out a gentler and more sympathetic physician.

A small percentage of them really did have something the matter with them, which, when corrected, made them, I think, more useful and valuable citizens.

Nowadays, I fancy, the average doctor does not run so large a percentage of neurotics and neurasthenics as formerly. People generally are better educated in matters of health and are less content to be otherwise than healthy. Christian Science, with its cultivation of auto-suggestion, has undoubtedly cured many of the functional neurotics, and our perfection of diagnostic methods in recent years, has enabled us to recognize and relieve another large percentage, so that, to-day, I feel the diagnosis of neurasthenia is much less often made, and then made with the mental reservation that the

patient might have some definite functional or organic basis for his ill health.

Then again, these people are apt to drift rapidly into that class designated as "floaters" because of their tendency to consult one doctor after another, and various specialists.

Many are fortunate enough to fall into the hands of a good diagnostician early in their rounds, and may quickly get started on their road to health, before they become confirmed neurasthenics.

Unfortunately, medicine has become such a manifold and complex matter, that no one man can hope to know it all, hence the necessity will always remain for specialists who have qualified along certain definite, even if narrow, lines.

But before the specialists, will come the "clearing house." By that I mean that in the future obscure cases of illness will be put through "the mill," in a diagnostic sense, by a group of men, skilled in the various phases of diagnosis, so that before any treatment is instituted, the patient will have been thoroughly investigated, physically, mentally, pathologically, and roentgenologically.

It is astonishing how such thorough methods of diagnosis clarify the obscure cases and indicate definite therapeutic procedure.

But to return to the problem of the neurasthenic from the diagnostic standpoint. Neurasthenia is simply a symptom complex, "marked by a host of subjective symptoms and very few objective phenomena, all more or less variable, and most of them inconstant. As a rule, all forms of nervous energy —psychic, motor and organic—are reduced, so that fatigue is more quickly occasioned than in health. There is less endurance, and consequently greater irritability, which shows itself in the mental sphere."—(Church and Peterson).

The majority of such cases have a discoverable underlying cause. It may be some organic change, it may be some disturbance in that complicated inter-relation of the endocrine glands, it may be a mere matter of faulty nutrition, excessive work or poor hygiene.

Regardless of the cause, the nervous element must always be appraised, and figure in the diagnosis somewhere, as so much per cent. For instance, we may enter a diagnosis as 25 per cent. gall bladder, and 75 per cent. nerves, and thus express the condition of ill health. He is a brave man, in

these days, who pronounces a diagnosis of 100 per cent. neurasthenia.

The predominating complaint in the neurasthenic is fatigue, mental as well as physical, hence the term nervous prostration, or the fatigue neurosis.

In taking case histories, how often do we get the story of a previous attack of nervous prostration. We make a mental note that the medical attendant at that time either could not make a diagnosis, or was not sure enough of his ground to communicate it to the patient. How often we find definite evidence that the attack of nervous prostration, so-called, was none other than an endocarditis or pulmonary tuberculosis. Persistent fatigue is simply a symptom of ill health.

When a case history is well taken, one should be able to make a tentative diagnosis before touching the patient. But it requires a cross-examination worthy of a criminal lawyer to make anything logical out of the indefinite symptoms and vast amount of irrelevant data heaped upon us by the average neurasthenic.

As Harold L. Foss said, in a paper on "The Element of Error in Abdominal Diagnosis: "The attempt to bring clarity out of the tale of symptoms as presented by the full-fledged neurasthenic is the most difficult thing in medicine. And there is no task in law or ministry approaching it."

I think nothing causes the consulting diagnostician more concern than referring a confirmed neurasthenic to him. With all the laboratory resources at his command, he still must be equipped with a large measure of diagnostic intuition, a profound knowledge of human nature, and must have constantly in mind that more diagnostic mistakes are still made from not looking than from not knowing. Nothing is more gratifying than the successful ferreting out the cause of ill health and seeing the patient restored to activity and efficiency by some simple corrective measures.

It was my intention, when I selected the neurasthenic as my topic, to illustrate the possible causes of the condition with case records.

As it is quite a favorite sport for the busy general practitioner to wish these troublesome patients on anyone who sets himself up as a diagnostician, my opportunity for studying these interesting victims has been considerable.

Studying these cases is like reading a detective story—the

interest is consuming until the mystery is solved, then it is all very commonplace. So I'll not trouble you with detailed cases.

Our increasing knowledge of the endocrine glands, whose secretions have such deep and far-reaching effects upon growth, nutrition and health, has helped to furnish definite diagnoses in a large number of cases and remove them from the category of neurasthenics. Mild hyper-thyroidism without the goitre and the exopthalmus, proves the factor in many cases. Hypothyroidism is another not uncommon condition which when thought of, can readily be subjected to the therapeutic test, often with brilliant results.

I have under my observation now one husky neurasthenic —husky as far as physique is concerned, but without the physical or nervous endurance of a child, with the usual chain of symptoms, headache, backache, vertigo, palpitation, tearfulness, etc., whose symptom complex has developed since an attack of mumps ten years ago, when 36 years old, which was associated with an ovaritis. Her condition is improving with ovarian extract.

A mild grade of heart failure is a common finding. Quite a few of my cases have had a chronic gall bladder. Tuberculosis is also a frequently associated condition and when one bears in mind that pulmonary tuberculosis is quite often an intermittent disease, many a history of nervous prostration is readily explained.

An active endocarditis, even a sub-acute infectious endocarditis, or septic endocarditis, has been considered neurasthenia in its early stages. In this connection it is well to bear in mind another clinical syndrome, neurocardiac-asthenia, which has been an important medical factor in the recent war. Here we have easy physical and mental exhaustion, emotional irritability, tachycardia, tremor, vertigo, fainting, precordial pain, cyanotic extremities, easy sweating, etc. A picture easily dismissed as neurasthenia.

The anaemias may often simulate neurasthenia. I recently saw at the Mayo clinic a young woman who had been considered a neurasthenic, even to the extent of a sojourn at Battle Creek. A routine physical examination disclosed an enlarged spleen, which suggested a blood count, which revealed a white count of 450,000—a leukemia in other words.

One must always be on the lookout for pernicious anaemia with its vague symptoms of fatigue and paresthesias.

Another common cause of this neurasthenic syndrone is focal infection. A few months ago a gentleman consulted me because of indefinite ill health and a marked disinclination to do anything, much to the concern of a dependent family. He had shifted from one place of employment to another. He had enough ability to secure a position, but not enough application to hold it.

His examination disclosed only a state of under-nutrition, a mild secondary anemia, and a number of carious teeth. I wished these extracted but failed to impress him with this necessity until he had a sharp attack of brachial neuritis. He eventually had that focus of infection removed with prompt relief of the neuritis, and now has regained his weight, and mental and physical efficiency.

Remember such a focus may be in the sinuses, the gall bladder, the tubes, or the appendix. Chronic poisoning is an insidious sapper of the nervous and physical health.

One could cite many cases of chronic poisoning from coffee, alcohol and tobacco; many abnormal social and hygienic habits, which must be sought out and corrected before health can be regained. Their detection in many cases, depends upon the personality of the examiner.

Intestinal parasites are also a common causative factor. Witness the ravages of the hook-worm, for instance. Any diseased condition or habit which results in a drain upon the vitality of a nervously disposed subject, may result in that complex of symptoms recognized as neurasthenia.

The harmful effects of underweight are quickly shown in the nervous system. Several times a year I see a person the victim of self-starvation. Frequently they haven't the teeth with which to chew their food. Or they imagine that this or that food does not agree with them, so that they unconsciously eliminate one thing after another until their nutrition becomes seriously impaired. It seems incongruous that in this age when many seem to live to eat, that this should be so.

It is necessary to sharply revise their point of view, at times with the advice to eat everything first and have their digestion adapted to the new order of things secondly.

Some years ago I was asked to see a young woman who had been in sanitoria and hospitals for the rest cure, with diagnoses ranging from tuberculosis to gall stones, with neurasthenia as a side issue. A history of periositis and the size of

her liver, suggested lues to me. The Wassermann was XXXX. She is now one of the healthiest, huskiest patients that I have.

Syphilis must always be considered in any indefinite illness, regardless of the family or social status.

In conclusion, then, let me repeat, that neurasthenia is only a symptom complex. To make it a 100 per cent. diagnosis is simply to confess our ignorance.

VENEREAL DISEASES IN RELATION TO PUBLIC HEALTH.

BY

LEON T. ASHCRAFT, M.D.

Professor of Genito-Urinary Diseases, Hahnemann Medical College and Hospital, Philadelphia.

(Paper read before the Young Men's Christian Association, June 6, 1919, as a part of the campaign against venereal diseases suggested by the Surgeon-General of the U. S. Public Health Service.

It gives me great pleasure to appear before you to talk on a subject that is one of the most important that is occupying the attention of the public at the present time. I especially appreciate the honor of this invitation because of the fact that it is the second occasion on which I have addressed the Young Men's Christian Association concerning this matter. Some of those present may remember my former paper, in which, curiously enough, I advocated many of the reforms that have since been put into effect, among which may be mentioned the admission of venereal cases to hospitals and the establishment of free dispensaries for treating those who are unable to pay for the services of a private physician.

The principal venereal diseases are gonorrhea, syphilis and chancroid.

Chancroid is a soft, non-syphilitic sore, which is usually found on the genitalia, or privates, and arises soon after intercourse with an infected person. It begins in the form of a pustule, grows rapidly, and soon breaks down and discharges pus. It is purely a local condition, and rarely affects the general health.

Gonorrhea, familiarly called "clap" or a "dose," was so named because it was at first thought to be due to an involuntary flow of semen. This involuntary emission, how-

ever, is a perfectly normal occurrence, and does not indicate that the man has gonorrhea. This disease is the result of infection during sex intercourse. Like chancroid, it is, at first, a purely local condition, the first sign noticed being a discharge of pus, which commences about four days after exposure. Infection may also occur through the touching of infected articles, such as the seats of toilets.

Judging from references to it in the works of writers of various ancient nations, gonorrhea was common in almost all the countries of the ancient world; although the microbe producing it was not discovered by Neisser until the year 1879.

It is a mistake to regard an attack of gonorrhea lightly, and think that it is no worse than a bad cold. Although a local disease, it has constitutional manifestations. If treatment is neglected, these may be very serious.

The complications of gonorrhea are numerous and far-reaching. In the male, it settles in the prostate gland and the seminal vesicles, as well as the urinary organs, laying the foundation for subsequent tuberculosis. It makes of man's genital organs a storehouse for germs; and although the disease may lie dormant and the patient be thought cured, the organisms may be awakened into activity from time to time, often as late as eight or ten years after exposure. Indeed, so frequently is this the case that we have the saying, "Once a gonorrhoeic, always a gonorrhoeic." Like most other maxims, however, this must not be accepted literally; for, as will be seen later, persistent treatment will, in the majority of cases, effect a cure, if undertaken in time. Not only does the disease devitalize a man's general health, but it also is often the cause of his having to undergo operations that unsex him and unfit him for matrimony.

However, these microbes, called gonococci, are almost certain to produce the same diseases in his sexual partner, making her a chronic invalid, preparing her for the operating table, or even completely unsexing her. The statistics collected by Ex-President Roosevelt's Homes Commission at Washington in 1908 showed that fully 80 per cent. of all the operations for inflammatory diseases peculiar to women were due to gonorrhea. The disease in the female rapidly involves the bladder, sometimes the kidney, and commonly the womb and ovaries; and unless it is checked in time, it may render it necessary for her to have the organs of generation removed.

Moreover, these bacilli in the uterus of a woman are extremely likely to infect the eyes of her offspring at birth, producing ophthalmia neonatorum, or infantile blindness. It was computed that fifteen thousand of the fifty thousand blind persons in the United States at the time the Homes Commission collected its statistics owed their affliction to this cause. Besides, Neisser, the discoverer of the germ, estimated that 45 per cent. of all involuntary childless marriages originate from gonococcal infection.

It may be remarked here that blindness in the new-born may be absolutely prevented by having a few drops of a solution of nitrate of silver put into the eyes of the baby. This should be done whenever there is any suspicion of the existence of gonorrhea; and, indeed, as it does not harm, even if not needed, it is well to adopt this procedure as a routine measure in every case.

Not only from the humanitarian, but also from the economic standpoint, would this be of great value; as it costs about thirteen times as much to educate a blind child as to educate one that is normal in this respect. One should be glad that the infection in the child is so easily controlled, and wish that it might be equally simple in the mother.

Syphilis is caused by the spirocheta pallida, which was isolated by Schaudan and Hoffman in 1905, and may be spread in several ways.

As is the case in gonorrhea, the usual method of infection in syphilis is by sexual intercourse. Fournier claims that one in five of his syphilitic patients is a wife infected by her husband. Persons may also acquire the disease by touching articles infected by a diseased person. These articles need not, as in gonorrhea, have come in contact with the sexual parts of the body, but may have been infected by the hands, face, or any other diseased part. Thus it will be seen that syphilis may be acquired innocently by using towels or other toilet articles belonging to another, the germs entering through broken places in the skin, often so small as not to be discernible with the microscope. When due to infection through contact with diseased persons or the articles infected by them, the disease is termed acquired syphilis.

The first manifestation of acquired syphilis is a sore at the point of infection, which is usually, although not always, upon the genitalia. This sore is called a "chancre," and ap-

pears after a distinct incubation period of twenty-one days. This initial lesion is hard, and usually does not cause much inconvenience to the affected person; but it is actively infectious to others. It is at this stage that the disease is most suspectible to treatment. Instead of being hard, it may resemble a chancroid in consistency, thus leading to an error in diagnosis that may result in deferring proper treatment in the expectation that the little pimple will cure itself.

Within about six weeks, this primary lesion is commonly followed by secondary manifestations in the skin and mucous membranes in the form of rashes and mucous patches. These are accompanied with involvement of the hair and nails, inflammation of the eyes, joints, etc., and evidences of general infection. These secondary lesions are also infectious to others, although they may not greatly distress the patient.

Later, commonly after the expiration of from six months to a year or more, the special organs of sense, as well as other organs, such as the kidney, heart and liver, become affected; although these tertiary lesions may become manifest at any time after the appearance of the chancre, the secondary stage being scarcely noticeable or entirely lacking in some cases. The tertiary lesions are deep-seated, and malignant, but not so infectious as the lesions seen in the earlier stages. The most pronounced characteristic of this tertiary stage is the formation of tumors in the different organs of the body. These tumors are called gummas, because they are composed of a gummy material.

Finally, there may ensue, after the disappearance of the other syphilitic lesions, affections of the nervous system, such as locomotor ataxia, paralysis, softening of the brain, idiocy and insanity. Syphilis is the cause of over 90 per cent. of the cases of locomotor ataxia.

These various manifestations cannot really be considered as stages or periods of syphilis, although they are called so for the sake of convenience; because, after the initial sore, which may be so insignificant as to pass unnoticed, there are many variations in the course of the disease. The secondary lesions, as previously remarked, may also be so mild as to escape attention, and the tertiary lesions may either occur simultaneously with the secondary or never appear at all. Moreover, the nervous manifestations may be present at the same time as the tertiary lesions.

The disease may likewise be transmitted to their children by infected parents. The babies may be so badly diseased as to be born dead or die soon after birth. Statistics from the same source as those previously quoted show that syphilis is responsible for 42 per cent. of abortions and miscarriages, and that from 60 to 80 per cent. of the offspring of syphilitics die before or shortly after birth, those surviving being subject to physical and mental defects. This condition is known as hereditary syphilis.

This form manifests itself in disease of the bones, joints and nervous system. The mode of infection being different, there is no chancre, or primary sore; and the secondary lesions may be either wanting or so mild as to pass unnoted. Owing to the undeveloped state of the tissues attacked, great deformity is produced in these cases. Some of these children, however, remain apparently healthy for some time, and later develop the disease.

The wide prevalence of these venereal diseases is almost incredible. It has been stated that 60 to 80 per cent. of all young unmarried men suffer from gonorrhea at some time; and about the same percentage of pelvic suppurations requiring operation in women are due to the same disease, which attacks all classes of society. The same is true of syphilis. Before the war, we did not really know the extent to which these diseases threatened our national life. The army and navy statistics afford a fair idea of the relative frequency of venereal diseases among unmarried men in this country as these diseases constituted the greatest single cause of disability among these men, drawn from all walks of life. It was found that in five National Army Camps (Dix, Lee, Upton, Meade and Pike), the admission rate for venereal diseases per 1,000 men was 337.2. Of 45,000 cases reported from March 29 to November 15, 1918, nearly 6 per cent. had contracted the disease before enlistment. Two hundred and eighty thousand cases have been treated in the United States Army, and five out of every six of these cases already existed at the time of admission into the service.

Keyes, from records covering half a century of practice by his father and himself, states that the proportion of syphilitics to gonorrheics varied from 1:8 to 1:15. The statistics of the Surgeon General of the Army for 1908 show between four and five times as many gonorrheics as syphilitics. In

1904 the proportion was about the same among the soldiers, but among the officers, the number of cases of the two diseases was about the same. Gonorrhea ranked first, according to the number of men treated for various illnesses, being followed in order by malaria, bronchitis and influenza. Syphilis came fifth on the list, and chancroid sixth.

While so much less frequent than gonorrhea, and while not the cause of a great number of deaths, syphilis destroyed more careers among the soldiers than even tuberculosis. The amount of injury produced by syphilis when it attacks an individual is shown by the fact that life insurance companies will not insure the life of a syphilitic person four or five years after the contraction of the disease; and even then, they charge a higher premium. This is purely a business matter with them, for their records show that this disease has a tendency to shorten life; and that the death-rate among syphilitics, other things being considered, is twice as high as among persons who have never had that disease.

Just as the life insurance companies have found venereal diseases to be an economic factor, so the Government has found them to be, not only among the enlisted men of the army and navy, but also among the workers in munition plants and other war industries, greatly limiting the output from these factories, and thus having a very important relation to the problem of winning the war. For this reason, attention has been directed to the necessity of combating the venereal peril among the civil population; and the Government has devised a program for this purpose, in the carrying out of which the hearty co-operation of the civil authorities is solicited. The passage of the Chamberlain-Kahn Bill, creating the Interdepartmental Social Hygiene Board and the Division of Venereal Diseases in the United States Public Health Service, will enable them to carry out this program throughout the United States. State and Municipal Boards of Health should lend their co-operation and assistance in carrying into effect the measures included in the Government's program: for the fact that five-sixths of these diseases were brought into the army from civil life shows that this problem is primarily a civil one. The same measures found so effective by the United States in dealing with it during the time of the war will be found equally effective when applied, with slight modifications, to the civil population by the constituted authorities.

What, then, are the measures constituting this "Program of Attack"? It is divided into four distinct parts. The first three relate to prevention, and the last to cure:

1. Social measures for the purpose of diminishing temptation.
2. Education in regard to venereal diseases.
3. Preventive measures.
4. Medical treatment.

Let us consider these in their order. The social measures to diminish temptation include the suppression of prostitution and the liquor traffic and providing proper social surroundings and recreations. There have been many differences of opinion as to how the suppression of prostitution could best be brought about, if at all; and many well meaning persons have strongly approved of the segregation of prostitutes in so-called "red-light" districts, claiming that by eliminating all the other attractive features, such as music, bright lights and intoxicants from these sections of the city, and compelling persons who persist in indulging in illicit social intercourse to do so with their eyes open, the authorities could succeed in reducing this form of vice to a negligible amount; and that by insisting on periodical medical examinations of all prostitutes, they could prevent them from spreading venereal diseases among their patrons. The fallacy of these contentions is easily proved. In the first place, each prostitute may cohabit with several men every day, and the first one following the medical examination may infect her; and she, in turn, may infect every man with whom she has intercourse between that time and the time of the next medical examination. Moreover, the hasty examinations usually given may not reveal the presence of disease, even when it exists. It is easy for the woman to hide her condition, if she wishes; and she may herself be ignorant of it. In addition to this, it may be said that the worst carriers of disease are not the professional prostitutes, but the women and girls who are not regular prostitutes, but permit men to have sexual intercourse with them. Nearly all of them are diseased, and they lack even the education in hygienic care of themselves that is usually possessed by the professional prostitute.

Therefore, it is clear that segregation does not segregate disease. The red-light district should be completely closed, and commercial prostitution absolutely suppressed. With the

assistance of an enlightened public opinion and a non-political police system, it is possible to accomplish this.

As liquor renders it easy to lose control of one's thoughts and difficult to resist temptation, and also makes the body more susceptible to disease, the liquor traffic should also be suppressed as a measure tending to the prevention of venereal diseases. When the new liquor law goes into effect on July 1st, much of the difficulty in enforcing this measure will be overcome.

In regard to providing proper social surroundings, it may be said that as the Government, during the war, with the aid of such organizations as the Young Men's Christian Association and the War Department's Commission on Training Camp Activities, provided healthful bodily and mental recreation for the soldiers, so the State and municipality, with the assistance of women's clubs and other social and religious organizations, should establish centers for recreation. Many of these recreation centers now exist in our city. Young people need wholesome companionship and amusements, and should have places where they can enjoy these, including dancing, under proper supervision. This will keep them from undesirable associations such as are encountered in many of the low-class dance halls.

From the standpoint of prevention, however, I believe that the most important factor is education. This education should begin with the children in the home. It is the duty of parents to instruct their children at a time when their minds are most susceptible to such impressions. This education should continue on through adolescence and up to maturity, self-control being instilled and character formed. The home should be a pure and clean place, and the parents should themselves set the example of goodness. Children should have explained to them the physiology of the sex organs, the way to keep them healthy, and the evil effects of masturbation, or self-abuse, especially in the weakening of the will produced by it.

The education begun at home should be continued in the school, where instruction should be given in sex hygiene and physiology. It should be pointed out that control of the sexual instincts is dependent upon selecting good associates, keeping the body and mind occupied in harmless and useful ways.

The public at large should also be instructed. As education formed an important part of the measures adopted by the

Government to check the spread of venereal diseases among the soldiers and sailors, so it should be a principal factor in any civilian program. You can help in this in one way by obtaining from the United States Public Health Service and distributing pamphlets, which will gladly be furnished free on application, suitable for any of the six following groups: Young men, boys, girls and young women, parents, teachers and the general public. There are also available exhibits and motion pictures similar to those shown at the army camps. These exhibits should be held under the auspices of the city, the two sexes being allowed to attend at different times. Instruction should likewise be given in regard to the dangers of the general drinking cup, public toilets, the common towel and promiscuous kissing; and lectures on eugenics should be given to various groups. In this way, we may lessen the number of young girls who stray from the paths of virtue through ignorance, and of young men who are led astray by curiosity and a lack of knowledge. Those who have to deal with the victims of venereal diseases learn that in most cases the first fatal step was caused by ignorance and mis-education.

All of the measures so far considered have been in the nature of prevention, and, as the old adage says, "An ounce of prevention is worth a pound of cure." Prevention, however, takes two forms: Prevention of exposure, and prevention of infection after exposure. It is the former of these that we have been speaking of up to this time; we will now take up the latter.

Prevention of infection after exposure, or prophylaxis, is a matter that deserves more attention on the part of the public in general than it has heretofore received. While it would be well to be able to prevent entirely all venereal excesses, I fear that for some time to come this may prove but a Utopian dream. In the meanwhile, it would be wise to make use of means for avoiding, in a large measure, the disastrous consequences of such excesses, which, as has been already stated, affect not only the guilty ones themselves, but also the innocent persons with whom they may come in contact—particularly the members of their own families. The United States Government has been putting into the hands of every soldier and sailor a case containing certain drugs, which are to be used immediately after probable exposure to infection—if possible, within one hour. The general use of these would probably

result in a large decrease in the number of venereal cases. Moreover, every soldier is required to report, on his return to camp after a visit to a neighboring town, and state whether he has exposed himself to venereal infection. A failure to do this is severely punished. It would be well if men who are not soldiers would follow their example in seeing a physician at once after any such occurrence.

The last part of the program for combating the venereal peril consists in medical treatment for those who have been unfortunate enough to contract such a disease. The question now arises, Can these terrible diseases be cured? Yes, when not neglected too long, they are more readily controlled than either tuberculosis or cancer. Therefore, it is important to have their existence recognized early. If anyone has reason to believe that he may be a victim of one of these affections, he should at once see a reputable medical man, who will give him a thorough examination and have anything suspicious that he may discover submitted to laboratory tests. In this connection, I would strongly emphasize the importance of not going to a quack, or advertising doctor. Neither should one seek the advice of a druggist or a friend. Such a course of action will surely cause an unnecessary loss of precious time, and will render the subsequent treatment much more difficult, if not, indeed, hopeless.

Recent laboratory researches have disclosed methods for testing the reality of supposed cures in these cases, and also of determining the presence of these diseases, should it not be possible to make certain of their existence by other means. These laboratory methods are the Wassermann Test for syphilis and the complement-fixation test for gonorrhea. They must, however, be made by one who has a full knowledge of their limitations, or they may lead to a belief that the patient is cured, when this is not true.

While, as I have said, most cases are curable, if the requisite time and attention are given to their treatment, many patients have not the patience to remain under the doctor's care as long as their condition requires.

Some may say: "It is all very well to advise going to a doctor for a long period of time; but who, in the case of a poor man, is going to foot the bill?" That is a very pertinent question. It is, moreover, often impracticable for those who are not blessed with much of this world's goods to have the

treatment carried out at home or at the office of the physician. To meet this situation, hospitals have, of late, been establishing wards for the reception of venereal patients; and dispensaries for the free treatment of venereal cases among the indigent have been recently opened. You may recall that in my former paper, I made a special plea for the adoption of both of these measures; and I am glad to be able to state the progress that has been made in this direction.

In conclusion, I would again emphasize the necessity of consulting a physician at once and obeying his instructions exactly. The U. S. Public Health Service has issued a pamphlet containing very clear directions for the guidance of those suffering with gonorrhea and syphilis; but these do not take the place of medical treatment.

The best treatment of all, however, is prevention; and prevention of exposure is far better than prevention of infection after exposure. It would be as sensible to expose a child to infection from a case of diphtheria, and then give antitoxin to prevent it from developing, as it is to expose one's self to venereal infection, and then rely on the application of prophylactic remedies to prevent one from suffering the consequences. Keep away from illicit sexual intercourse, and you will not need prophylactics. Manhood is not lost by the nonuse of the sex organs, but by their abuse. Learn to control the sex organs by not thinking about or looking at things that excite the sex feelings, and turning the thoughts upon some wholesome subject, such as athletics or some branch of study. A man who devotes his energies to work for others or preparation for a career of usefulness, will have no time for indulgence in vice.

Partial Hereditary Anonychia.—Jacobs reports a case of partial hereditary anonychia. The patient was a man 34 years old who was suffering from trench fever. There was an entire absence of nails on the thumbs, forefingers and second fingers of both hands, and the nails on the third or ring fingers were only developed as regards the ulnar half. The little fingers had nails that were normal in every respect. The toes of both feet presented the same condition as the fingers. There was one remarkable difference, however, between the condition of the toes and fingers, viz., in the former were distinct grooves indicating the nail beds, whereas in the latter there was no indication of any attempt at nail formation.

The congenital absence of the nails was a hereditary defect in the patient's family. No inconvenience was caused the patient by the absence of the nails.—*Glasgow Medical Journal.*

TREATMENT OF DISEASE WITH A SINGLE REMEDY.

BY

ELI G. JONES, M.D., BUFFALO, N. Y.

The better a physician knows his Materia Medica the quicker he can cure his patients. When the physician knows the definite action of remedies, it enables him to prescribe for the sick intelligently, rapidly and successfully. To be a good prescriber should be the highest ambition of every physician. If I live until 1920 it will then be 50 years since I began the practice of medicine. In this article I propose to show the reader what can be done in the treatment of the sick by a single remedy. The following facts are taken from my book of experience, the best of all books:

You will have a patient come to consult you about a cold, they may complain of a rawness and soreness in the chest with a tickling cough. This indicates one remedy, Kali Mur 3rd X; give three tablets every two hours.

You may be asked to prescribe for a little child; the mother will tell you that the child cries every time she goes to lay it down and the only way she can keep it quiet is to carry it. This indicates Tincture Chamomilla, 10 drops in half a glass of water, one teaspoonful to be given every hour.

You may be called to prescribe for backache; the patient complains of a deep seated pain over the kidneys. It calls for Tincture Berberis Vulgaris, give five drops every two hours.

If you have a case of asthma and you want to cure it the best remedy I have found is Natrum Sulph. 6th X. Three tablets every two hours. I have known of cases of thirty years' standing cured by this remedy.

When a patient has headache that begins at back of head, passes over the head and settles down over the left eye with profuse flow of tears, give Spigelia 3 X, fifteen drops in half a glass of water, teaspoonful every half hour until relieved.

In very many cases of indigestion that come under your treatment, the patient will complain of the following symptoms: an hour or two after eating there will be sour taste, pressure in the stomach, bloating, the clothes feel too tight, she wants to unloosen her clothes, there will be a yellowish

white coating on her tongue. These symptoms indicate Nux Vomica 3rd X, give three tablets every three hours.

In gall stone colic, there is one remedy that we can depend upon, Tincture Hydrastis 10 drops in wineglass of hot water every half hour until relieved.

If called out in the night to a case of cramps in the stomach, the best remedy is Tincture Dioscorea, sixty drops in a wineglass of hot water every fifteen minutes until relieved.

For a case of simple sore throat, I have found Kali Mur 3rd X the best remedy. Give three tablets every two hours.

A woman at the menopause may have a swelling of the feet and ankles, she cannot wear her shoes, the swelling does not pit on pressure. This indicates Apis Mel 3rd X, fifteen drops in half a glass of water, one teaspoonful every hour.

In intercostal neuralgia the best remedy is F. E. Asclepias Tuberosa, 20 drops every two hours.

You may have a case of enlargement of the liver (perpendicular), the patient complains of shortness of breath from fast walking, and sweats freely at slightest exertion. I have found in these cases that the pulse is very apt to remit every third or fourth beat. This form of enlargement of the liver indicates Tincture Chelidonium, 10 drops three times a day.

A large majority of cases of displacement of the uterus are caused by enlargement of that organ, the uterus sags down by its own weight. It indicates one remedy, Tincture Fraxinus Arm., give ten drops three times a day.

In old people who are asthmatic and have to sit up in bed, dyspnoea, great accumulations of mucus with much rattling and wheezing, give Tincture Senega, seven drops in half a glass of water, one teaspoonful every hour until relieved.

In your cases of dry catarrh (chronic) pain at the root of the nose, foul breath, greenish colored slugs and clinkers form in the nose and have to be blown out every morning. This condition indicates Kali Bichromate 3rd X, three tablets every three hours. For a local remedy, the best one is Sulphocarbolate of soda, dissolve one-half teaspoonful in a pint of warm water. Use one-half of it as a gargle for the throat, and the other half in an atomizer or douche three times a day. In the absence of a douche or atomizer, I have the patient pour a little of the liquid in the palm of the hand and snuff

it up first one nostril and then the other until they can feel it go down the back of the throat. As a local remedy for chronic nasal catarrh, it cannot be excelled.

You may have a case of ozena. There is obscure vision, pain in the eyes, a yellowish green pus is discharged from the nose, of a very fetid odor, and the patient may soil five or six handkerchiefs a day, the lining membrane of the nose is red and much inflamed and there is great difficulty in breathing through the nostrils. These symptoms indicate one remedy internally, Aurum Metallicum (gold) 3rd X, three tablets three times a day. Use the Sulpho-carbolate soda for local treatment as directed under chronic catarrh.

In a great majority of nervous headaches that come under your treatment, in reading the pulse you get a full bounding pulse with a globular feling as the artery strikes against the fingers. The head will feel confused and it will feel bigger than it ought to. The pain is a sharp, darting pain that makes the patient cringe with the pain. It is worse bending forward. These symptoms indicate Belladonna 1st X, give five drops every hour for three hours, then every three hours.

You may have a lady patient complain of having a yellowish profuse leucorrhoea, swelling of the genital organs, excoriation of the inside of her thighs. These symptoms indicate Graphitis 6th X, three tablets three times a day.

An old man may tell you that he has no control over his bladder, there is a constant teasing desire to urinate, the bladder feels too full but micturition does not relieve. These symptoms call for Tincture Equisetum, 10 drops every two hours. With such patients, especially old men, we may suspect chronic enlargement of the prostate gland and that indictates Graphites 6th X, three tablets three times a day.

In acute ovaritis, for the throbbing pain there is one remedy indicated—Belladonna 1st X dilution, five drops every hour for three hours. Then once in three hours. Wherever inflammation is localized as in the first stage of boils, abscesses, carbuncles, etc., with a throbbing pain, Belladonna is the remedy indicated.

In all my writings for the profession I have been careful and conscientious about not recommending any remedy or treatment unless it had been tried out by me in very many cases and found to be reliable. In this way I have built up a Materia Medica of tried remedies and when I tell a brother

physician that a remedy will do a certain thing, he has learned to depend upon what I say. Our business as physicians is to heal the sick and it is our duty to use every means in our power to accomplish that result. Your God, your Country, your Profession, your Family demand the best there is in you. Dear reader, are you doing your best or are you just drifting along with the tide? To be a physician is to know Materia Medica. To know Materia Medica is to know how to heal the sick. Dear reader, are you a physician or just plain "Doc" to your patrons and friends? "A wise physician, skilled our wounds to heal, is more than armies to the public weal."

Gonorrheal Keratoderma.—Reports are accumulating covering observations of cases of gonorrheal keratoderma. In a rather extensive case observed by Woodward the patient had a chronic urethritis for six years and polyarthritis. The skin lesion first made its appearance between the toes and fingers; then spread over the feet and fingers; discrete patches resembling oyster shells commenced to grow on the wrists, while dark brown patches were to be seen on the lower parts of the legs, on the elbow-joints, and subsequently three small lesions made their appearance on the face. Coincident with this, conical horny masses appeared on the terminal ends of the palmar surface of the fingers and plantar surface of the toes. Some of the nails dropped off. There was no discharge and the condition throughout maintained its horny character. At the same time the wrists, fingers and toes became much distorted; there was pain in the joints and marked general wasting. The patient was hardly able to move a muscle and was unable to feed himself.

As to treatment: it was commenced by giving a gonococcus vaccine, commencing with 3 millions and working up at weekly intervals to 120 millions. But slight improvement was shown except that the patient felt better and there was some lessening of the pain. It was then decided to give very small doses of gonococcus vaccine, never above 4 millions, combining with it small doses of an autogenous vaccine made from the streptococcus. An inoculation was given about every five days. From the commencement of the smaller doses a slow but steady improvement was seen. The pain soon ceased and the temperature came gradually down to normal. During the last three months the patient commenced to slowly recover the use of his mucsles. This improvement has continued until the patient is able to walk and the keratoses has almost disappeared.—*Lancet.*

A SCHEMA FOR THE GUIDANCE OF STUDENTS IN THE EXAMINATION OF PATIENTS.

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL.

FOREWORD.

IT is now universally admitted that the successful work in the practice of medicine depends almost, if not entirely, upon the proper methods of examining patients. This has been my contention for many years, and I have ever been active in committee work having possible bearings on the recording of the hospital cases. As was to have been expected, early schemata, although worked out most carefully, showed glaring defects in practice. These were corrected from time to time, so that now we find ourselves obliged to make fewer and fewer corrections with each republication of examination formulæ.

The students of Hahnemann College are furnished with the following schema to guide them in their clinical work: In the dispensary, the findings are recorded on cards without printed headings, excepting those relating to certain routine matters, as name, age, sex, residence, etc. In the hospital we have a large folder with headings providing for filling the information obtained by the investigation according to the schema. In addition, we have two additional headings, namely, "Summary of Case History on Admission," and "Summary of Condition on Discharge of Patient." We regard these as very important.

Of these, we find that the greatest difficulty is found in the preparation of the summary on admission. The disposition on the part of students is to write too much. These young men, when asked about a case, seem to be perfectly capable of telling the teachers all about the "high lights" of the case, but become thoroughly lost when it comes to making the record in writing.

But little trouble is experienced with the "summary on discharge." Here we expect to record only such abnormal conditions as remain at that time. A number of years ago we attempted too much in this respect, and thus we defeated our own ambitions. We elaborated a schema providing for a

most painstaking questioning and physical examination, and found it thoroughly impracticable. The latest and the simplest plan works best of all.

We still experience difficulty in the matter of daily notes. Here we have to contend with two difficulties, namely, the taking of such notes at too great length with tiresome repetitions on the one hand, and entire neglect of the notes on the other. This, after all, is a matter of education of the individual student or physician. The daily note is of special importance in that it indicates to the examiner the particular conditions existing at previous visits concerning which special interrogations must be made at subsequent examinations.

The following revision of our examination schema was prepared from last editions by a committee of which Dr. G. M. Golden was chairman.

CLARENCE BARTLETT, M.D.

PRINCIPAL SUBJECTS OF INQUIRY IN MEDICAL CASES.

I. GENERAL INTERROGATION.

Name. Age. Address. Occupation. Married, single, widow, or widower.
Chief complaint.

1. Family History.

Parents. Brothers and sisters. Patient's children. Other relatives.	Ages. Health, Illnesses and their duration. Cause of death. Special reference to the presence of tonsilitis, diphtheria, rheumatism, chorea, scarlet fever, convulsions, venereal disease, tuberculosis, cancer, paralysis, insanity, number of miscarriages and duration of pregnancy.

In children inquire in addition to above whether child is full term, normal, or instrumental labor, breast or artificially fed (nature of foods), presence of rash or snuffles at

birth, age of teething and walking, aural discharges, growing pains, weight at birth, blue baby.

2. Personal History.

Nature, character and duration of previous illnesses referring to diseases mentioned above. His exposure to any poisons especially lead, mercury, etc.

Habits as to alcohol, tobacco, tea, coffee and drugs. Environment, etc.

Places of residence.

3. History of Present Illness.

Duration. Possible causes. Onset (sudden or gradual or with chill or chilliness). At first, let the patient tell the story in his own words. Do not interrupt unless the patient is too verbose. Symptoms in the order of appearance. Loss or gain in weight.

II. SPECIAL INTERROGATION.

1. Alimentary System.

Appetite. Thirst. Taste.

Pain.—Location, character and radiation. Reference to time of eating, to certain foods and amelioration and aggravation. Presence or absence of discomfort or distention.

Nausea and Vomiting.—Frequency in twenty-four hours, length of time after eating, whether pain is made better or worse. Vomiting of food eaten the day before. Projectile.

Vomitus.—Amount, character, partly digested, acid, presence of blood (red or dark), "coffee grounds," mucus, sour or tasteless water-brash.

Eructations.—Acid or tasteless, flatulence.

Stools.—Frequency, character, color, shape, blood (red or dark).

Diarrhoea.—Number of stools in twenty-four hours, relation to food, bloody or slimy, color, with pain and straining.

Constipation.—Habitual, color, flattened or ribboned shaped stools, alternating with diarrhœa.

Pain.—Character and location and radiation. Sudden pain followed by jaundice or by frequency of urination and passage of bloody urine.

Hemorrhoids.

2. Respiratory System.

Cough.—Character, frequency, attended with pain or vomiting.

Expectoration.—Character, presence or absence of blood (red or dark), thick mucus, watery or frothy.

Chest Pain.—Character and location, aggravated by coughing or breathing, manipulation.

Hoarseness.—Constant or at intervals.

Dyspnoea.—Description of attack, spasmodic or constant, from exertion, presence of asthmatic attacks or orthopnoea.

Night Sweats.—Duration. Fever towards evening.

Hemoptysis.

3. Circulatory System.

Precordial Pain or Distress.—Character and location. Presence of acute precordial pain extending down left arm with numbness and tingling followed by eructations.

Palpitation.—Its relation to meals and to exertion.

Vertigo.—Subjective or objective.

Headache.—Character and location, amelioration or aggravation, with diplopia and tinnitus aurium.

Sleep.—Character and amount, whether refreshed in the morning, dreams, sudden startlings.

Dyspnoea.—Shortness of breath.

Oedema.—Location and extent, worse morning or bed-time. Where oedema first began. Cyanosis.

Pulsations and Throbbings.—Location.

4. Renal System.

Nocturnal Urination.—Frequency and duration.

URINE.—Frequency during day, color, odor, presence of blood.

VISION.—Dimness or momentary blindness, spots before eyes.

DROWSINESS.—Gastric irritability. Headaches.

OEDEMA.—Face and hands.

DYSURIA.—Burning, tenesmus, urethral discharge (character and duration).

LUMBAGO.—Muscular cramps and twitchings, convulsions (number and description of).

JOINTS.—Stiffness, pain or gradual distortion, duration, whether affected by wet weather, (muscular atrophy).

5. Female System.

Number of children and miscarriages.

MENSES.—Age of first period, regular, duration and description of flow.

PAIN.—Character, location, its relation to time of flow.

Hot flushes and nervous symptoms.

LEUCORRHOEA.—Amount, duration, character, with frequency and painful urination.

6. Neurological System.

HEADACHE.—Character, location, modality, (time of day).

VISION.—Gradual loss of sight, diplopia.

EARS.—Impaired hearing, discharge (character and duration), tinnitus.

MENTALITY.—Impaired, forgetful, non-concentration.

GAIT.—Character and description.

PARALYSIS.—Character and location.

HANDS.—Fine or coarse tremor, localized sweatings.

TONGUE.—Inability to protrude in a straight line, tremor.

CONVULSION.—Age at first fit, description of attack, interval between attacks, during sleep, with any aura, gradual or sudden onset, uni- or bi-lateral movements, micturate, defecate or bite tongue during attack, general or localized, conscious or unconscious, after symptoms (headache, drowsiness, etc.).

III. PHYSICAL EXAMINATION.

Having interrogated the patient, proceed first to an investigation of the patient's general state, then to examination of the system most affected, and finally of each of the other special systems.

1. General Condition.

General state of consciousness, intelligence, development and nutrition. Decubitus, if in bed; or attitude and gait, if up. Expression of face. Pallor, cyanosis, jaundice, dropsy, trophic changes. Glandular enlargements. Character of respiration. Temperature.

2. Alimentary System and Abdominal Viscera.

MOUTH.—Inspect teeth, gums, tongue, pharynx, fauces.

STOMACH.—Palpate. Percuss. Examine contents (test meal or vomit).

INTESTINES.—Percuss. Palpate and inspect. Rectal examination, if necessary. Examine fæces.

LIVER AND GALL-BLADDER.—Inspect, palpate and percuss.

ABDOMEN.—Inspect, palpate and percuss generally.

SPLEEN.—Palpate and percuss.

KIDNEYS.—Palpate.

OVARIES AND TUBES.—Palpate.

3. Circulatory System.

PRÆCORDIA.—Inspect. Palpate.

HEART.—Percuss. { upper border, right border, left border } superficial. deep.

Auscultate—

at apex.
tricuspid area.
pulmonary area.
aortic area.
about third left interspace.
veins and arteries of neck.

If a bruit is heard, note—

Its time.

Its character (harsh blowing, etc.).
Its point of greatest intensity.
Its direction of transmission.

PULSE.—Rate.
Rhythm.
State of vessel walls.
Blood-pressure during and between beats.
Sphygmographic tracings.

4. Respiratory System.

Inspect chest (shape, expansion, etc.).
Palpate chest (expansion, vocal fremitus).
Percuss lungs (anterior, lateral, posterior).
Auscultate in same order. Note—
Type of breath sound.
Character of vocal resonance.
Presence or absence of accompanying sounds.
Examine sputum with naked eye.
Microscope (bacteria, connective tissue, etc.).

5. Nervous System.

Investigate (a) intellectual faculties (intelligence, memory, speech, sleep, delirium, coma, etc.).
(b) Cranial nerve functions (tests).
(c) Motor functions { presence or absence of paralysis. / abnormal muscular movements. / state of muscular nutrition.
(d) Sensory functions (touch, weight, temp., stereognostic and pain sense; abnormal sensations).
(e) Reflexes.
(f) Electrical reactions.
(g) Fundus of eye (ophthalmoscope).
(h) Vasomotor and trophic changes.

Laboratory Examinations—

URINE.—Reaction, Quantity, Albumin, Sugar, Microscopical, Bacteria (T. B.), Renal Efficiency Test (Colorimeter).

BLOOD.—Complete and Differential Count, Hemaglobin, Parasites, Blood Culture, Widal, Wassermann.

SPUTUM.—Tubercle Bacilli, Pneumococci, Other Organisms, Elastic Fiber.

STOMACH.—Gastric Analysis, Quantity, H. Cl (Free and Combined). Total Acidity, Lactic Acid, Blood, Ferments, Wolff-Junghans Reaction.

FECES.—Blood, Parasites, Fats (Split and Unsplit).

X-RAY.—As history of case suggests.

Exams., Path. Tissue, Effusions, Discharges (Culture), Special Exam.: (Opinions), Surgeon, Ophthalmologist, Otologist, Laryngologist, Gynecologist, Obstetrician, Neurologist, Pedologist, Orthopedist, Proctologist, Urologist, as needed.

A SYLLABUS OF DR. KLOPP'S LECTURES ON MENTAL DISEASES BEFORE THE SENIOR CLASS OF THE HAHNEMANN MEDICAL COLLEGE OF PHILADELPHIA.

Definitions of Insanity.

General Symptomatology of Mental Diseases.

1. Disorders of the Content of Thought: Delusion, Definition, Classification.
2. Disorders of Perception: Hallucinations, Definition, Varieties, Illusions, Definition, Varieties.
3. Disorientation.
4. Clouding of Consciousness.
5. Disorders of the Train of Thought: Flight of Ideas, Circumstantiality, Retardation.
6. Disorders of Volition (Will): Decreased Psychomotor Activity, Increased Psychomotor Activity, Stereotypy, Negativism, Suggestibility, Stupor.
7. Disorders of Emotions: Exaltation, Depression, Apathy.
8. Disorders of Memory: Attention, Personality, Judgment.
9. Lack of Insight.

CAUSES OF MENTAL DISEASES.

Predisposing: Inherited Predisposition (Heredity), Acquired Predisposition, General; Age, Physiological Epochs, Sex, Civil Condition, Climate, Civilization, Race, Training and Education.

Exciting (Stress): Toxic—Exogenous, Endogenous; Physical—Traumatic, Infectious, Exhaustion, Bodily Disease; Mental—Acting over a short period of time, such as Fright. Acting over a long period of time, such as Worry.

EXAMINATION OF A PATIENT.

1. Anamnesis of the Family.
2. Personal History previous to the Disease.
3. Anamnesis of the Disease (Present Illness).
4. Status Praesens and General Observation of the Patient.
5. Special Examination of the Patient: a. Physical—General, Respiratory System, Circulary System, Gastro-Intestinal, Genito-Urinary, Special. b. Neurological. c. Mental—General, Special Tests.
6. Mental Examination: Demeanor and Appearance, Disturbances of Orientation, Emotional Status, Disposition, Disturbance of Perception, Disturbance of Memory—Recent and Remote, General, Family and School, Special; Train of Thought, Delusions, Attention, Judgment and Insight, Clouding of Consciousness, Volitional Field, Disturbances of Apprehension.

TREATMENT.

1. Rest in Bed (no seclusion or restraint, mechanical or chemical).
2. Attention to Food and Nutrition. (Three meals, lunches, tube feeding, massage, oil baths).
3. Homœopathic Medication.
4. Observation of Weight.
5. Hydrotherapy (Continuous Neutral Baths and Warm Packs; Hydriatric Douches, Sprays, etc.).
6. Modification of Rest Treatment—gradual.
7. Fresh Air.
8. Exercise.
9. Diversional Occupation.
10. Psychotherapy.
11. Psychoanalysis.

CLASSIFICATION OF MENTAL DISEASES.

1. Manic—Depressive Psychoses: a. Manic type; b. Depressed type; c. Stupor; d. Mixed type; e. Circular type.
2. Involution Melancholia.
3. Psychoses with Somatic Diseases: a. Delirium with infectious diseases; b. Post-infectious psychosis; c. Exhaustion-delirium; d. Delirium of unknown origin; e. Cardio-renal diseases; f. Diseases of the ductless glands; g. Other diseases or conditions (to be specified).

4. Dementia Praecox: a. Simple type; b. Hebophrenic type; c. Catatonic type; d. Paranoid type.
5. Paranoia or Paranoic Conditions.
6. Alcoholic Psychoses: a. Pathological intoxication; b. Delirium tremens; c. Korsakow's psychoses; d. Acute hallucinosis; e. Chronic hallucinosis; f. Acute paranoid type; g. Chronic paranoid type; h. Alcoholic deterioration; i. Other types, acute and chronic.
7. Psychoses Due to Drugs and other Exogenous Toxins: a. Opium (and derivatives), cocaine, bromides, chloral, etc., alone or combined (to be specified); b. Metals, as lead, arsenic, etc. (to be specified); c. Gases (to be specified); d. Other exogenous toxins (to be specified).
8. Psychoses with Pellagra.
9. Epileptic Psychoses: a. Deterioration; b. Clouded states; c. Other conditions (to be specified).
10. General Paralysis.
11. Psychoses with Cerebral Syphilis.
12. Traumatic Psychoses: a. Traumatic delirium; b. Traumatic constitution; c. Post-traumatic mental enfeeblement (dementia).
13. Psychoses with Brain Tumor.
14. Psychoses with Huntington's Chorea.
15. Psychoses with other Brain and Nervous Diseases: a. Cerebral embolism; b. Paralysis agitans; c. Meningitis, tubercular or other forms (to be specified); d. Multiple sclerosis; e. Tabes; f. Acute chorea; g. Other conditions (to be specified).
16. Psychosis with Cerebral Arteriosclerosis.
17. Senile Psychoses: a. Simple deterioration; b. Presbyophrenic type; c. Delirious and confused types; d. Depressed and agitated states in addition to deterioration; e. Paranoid types; f. Presenile types.
18. Psychoses with Constitutional Psychopathic Inferiority.
19. Psychoses with Mental Deficiency.
20. Psychoneuroses and Neuroses: a. Hysterical type; b. Psychasthenic type; c. Neurosthenic type; d. Anxiety neuroses.
21. Undiagnosed Psychoses.
22. Not Insane: a. Epilepsy without psychosis; b. Alcoholism without psychosis; c. Drug addiction without psychosis; d. Constitutional psychopathic inferiority without psychosis; e. Mental deficiency without psychosis; f. Others (to be specified).

THE SPIRIT OF CLINICAL RESEARCH.

BY

ALBERT E. HINSDALE, M.D., COLUMBUS, OHIO.

It is a fact apparent to the student of drug action and therapy that many of our remedial agents are recommended for certain conditions and are used in their treatment without being subjected to scientific study and investigation previous to their clinical use. The medicines are used more or less empirically, with scarcely any pharmacological, pathological or bacteriological data to substantiate their claim or to justify their employment in the conditions for which they are recommended.

Some of these medicines, to be sure, have a little justification for their application in certain conditions, which is based upon the uncertain ground that they were effective in cases of the sort for which they are recommended because, apparently, the results following their prescription were better than they would have been had the remedy not been used. This is the "clinical test" to determine the effectiveness of a given form of therapy. It will ever be more or less subject to error and will permit the drawing of unwarranted and exaggerated conclusions because it lacks that most important element, the basis of all scientific work, namely, the element of controls. It is only when special and unusual circumstances are operating, and these in an immense number of instances, that more than a hint as to the real benefit of the treatment can be obtained by this method. This "hint" must later be subjected to the crucial tests of experimentation in order that the inferences drawn may be substantiated or rejected.

The laboratory worker, by exactitude of dose, methods of handling the apparatus and organisms to be used, by his ability to vary at will all the environmental factors which the clinician obviously cannot make use of and by using numerous controls, can arrive at positive and genuine conclusions with reference to the effectiveness of any therapeutic agent in a given condition. Such investigations concerning therapy should precede the clinical use of remedies; then the clinician will know certainly that his treatment is really effective and not due to psychical suggestion, spontaneous recovery or to an accidental amelioration.

EDITORIAL

THE LAW AND THE DOCTORS.

"Beneath this starry arch
Naught resteth or is still;
But all things hold their march
As if by one great will."

Woven into the warp and woof of human progression, there has always appeared an indelible red thread; which unlike the more temporal components of the weave, seems indestructible. In all history it has survived the most powerful and determined efforts, both theological and legislative, to tear it out of the evolutional fabric. Many times in the past, under the strongly vested authority of reigning ignorance and arrogance, has this fine element sunk to the bottom of the weave, only to reappear when scientific progress and genial altruism had cleared the world-atmosphere of intolerance and oppression.

This fact of human progression in the face of often overwhelming opposition is of very deep ethnological significance. With smaller divergence, it applies to the slow liberation of common labor from the long established and highly fortified machination of caste and capital. Indeed, until recent times it was a tacit observation that even our courts of law, with all their theoretically inherent impartiality, were grossly influenced through devious and underhanded subterfuge, against the moneyless masses whose only possible champions were the misery of their lot and the justice of their cause.

On the other hand, as this slumbering muscular giant slowly awakened to the realization of its strength, as it had formerly contemplated only its helplessness, there appeared the beginnings of crude protective organization; which by the coarseness of its various isolated components, became "trade unionism;" a numerically preponderating power which com-

mon sense could have predicted (had there been any), would in time wield a brutal physical or political strength, capable of swinging the pendulum of oppression to an opposite limit of human tolerance.

Such a possible break in the balance constituted another ethnologic alarm, and again appeared the indestructible and opportune red thread of "common sense" now manifest in the many earnest and well intentioned efforts being made to remould capital and labor as mutual co-operations instead of traditional antagonists.

Among the many vexatious labor problems, there is one of considerable medical interest. This is the rights of labor to compensation for injury and occupational disease. For the fair adjustment of these innumerable cases, the ponderous machinery of hoary and antiquated court procedure has been about as applicable as an attempt to repair a watch with a pick axe. This has become so obvious that the legislative bodies of several States have seriously attacked the growing problem, and Pennsylvania has been trying out a method based on individual study of the cases, their systematic classification, and their adjudication on the principle of direct and impersonal community of justice and fair play. To this end, a Workmen's Compensation Board has been established to give impartial and inexpensive consideration to every case; and, after eliminating fraud and imposture, settle them according to their intrinsic merits.

There just comes from the official press at Harrisburg a pamphlet with the title "Medico-Legal Aspects of the Workmen's Compensation Law of Pennsylvania:" written by H. A. Mackey, Chairman of the Pennsylvania Workmen's Compensation Board. After a careful reading of this interesting document, we have nothing but praise to offer for Mr. Mackey's splendid statement of the medical and sociological facts which have come under his observation. Indeed, the whole context is so clear headed and fair, that we would like to go a step further and apply some of the conclusions to the entire field of expert medical testimony in other departments of its operation; since what is true of the medical witness in this particular field, is equally true of it universally.

Mr. Mackey's remarks concerning the inherent frailty of so-called medical expert testimony is most refreshing to those punctilious souls who have ever tried to live up to the ad-

monitions of Hippocrates. The Board quickly learned the sordid truth that medical "expert" opinion is purchasable in the open market; and that "the partisan medical witness is of very little value, while the disinterested medical expert is the *sine qua non* to the determination of doubtful medical issues." Honest medical men with hands clean of rabid partisan testimony can readily supply confirmation of the unfortunate fact that in all of the specialties, medical men have been bought with a price to testify in a biased manner, at times even assenting to opinions which they know to be medically or surgically untrue. Public opinion knows little of the stress ordinarily placed upon specialists by enterprising attorneys, and, therefore, does not reck with the golden lure which has led certain practitioners to stretch or becloud the truth for the sake of emolument. The spectacle of medical experts lined up in preconcerted array, often prompting the cross-examining attorney with questions designed to confuse their opposing colleagues, is not uncommon in our courts of law. Of course, this only happens when there is plenty of money. Honest jurists have repeatedly commented on this undignified medical scramble, and juries composed of honest laymen have been driven to the verge of mental chaos over hair-splitting terms and distinctions which have no significance whatever when they are not thus designedly loaded. There can be no question but that this way of doing amounts to pure class distinction, since the poor man before the bar of justice can call up no such "cloud of witnesses." For him, indeed, there are only the raw facts served on the hot griddle of circumstance, and in the absence of the courtroom dust of medical quibbles, he may even hang if his labor union does not come to the rescue.

The Compensation Board has the power to eliminate all of this confusion. There is no further delay with "the biased partisan testimony of medical witnesses . . ." which may result in "a travesty upon medical knowledge." But it forthwith "selects for itself a disinterested medical witness upon whom it may entirely rely." The essayist further remarks, "This medical witness must not only be a keen observer, but must approach the consideration of every case with an open mind" and possess "a ready capacity to draw conclusions from available facts."

The superiority of this plan must be obvious to everybody, and it should become universal practice. In all cases

at law, be they criminal or otherwise, it should be an established court procedure to have the judges appoint the necessary medical experts, who thereby are not affiliated with either plaintiff or defendant, but are alone responsible to the Court.

In this connection we would call attention to a recent article by a New York alienist, Dr. C. F. MacDonald, in which the grave scandal of our present methods is handled in no uncertain language. An editorial writer on the Public Ledger most admirably sums up Dr. MacDonald's views as follows:

"What Doctor MacDonald proposes is that after the jury has passed on the purely legal question of the establishment of the facts of guilt in any given case, then, if the accused be convicted of having committed the crime, in case the sanity of the defendant is raised, the court should appoint a commission of competent alienists to determine his mental condition. He also suggests that the English form of verdict, 'guilty but insane,' be substituted for the American usage, which gives the fatuous verdict of 'not guilty on the ground of insanity.' There is no question about it that such a change of procedure is in harmony with the spirit of the age and represents a great advance upon the present method of trying criminal cases in which the issue of insanity figures. It is about time that the lawyers awoke to the absurdity of the present system and its scandalous sequelae. Moreover, the MacDonald method is for all practical purpose in force in Australia, where a number of the states have special commissions which pass on the insanity of those who have committed crimes.

"But though there is little wisdom in their conservatism, it is not likely that the bench or the bar will pay the slightest attention to Doctor MacDonald's suggestion, even though such a procedure would put an end to a certain kind of expert testimony which is a stench in the nostrils of society and also would relegate the great 'criminal lawyer' who fattens upon the insanity plea in capital cases to a deserved seclusion."

W. D. Bayley.

THE FEDERATION OF STATES.

PERHAPS the most important matter to come before the Homœopathic Medical Society of Pennsylvania at its coming meeting is what the institute authorities have been pleased to call a Federation of States. Our State Society has no choice in the matter in that it is alleged that all of our State Societies, about thirty-four in number, with the exception of New York and Pennsylvania, have voted for it. Ohio has approved it but with a string attached. But it just happens that these three societies are our strongest. Under the circumstances, there seems to be nothing for us to do but to give the plan our vote even though we do not approve of it, and then do our best to make it a success.

From all that we can learn, the ideas of those who have the matter in hand do not appear to have taken such definite shape that they are ready to outline their methods of procedure. We do know that a contribution of one dollar per member in good standing is asked of each State Society. Virtually each society then gives anywhere from 20 per cent. to 50 per cent. of its income to the Institute, according to the annual dues prevailing. In Pennsylvania, we must give 20 per cent., as our dues are five dollars per annum. In Ohio, the contribution will be 33 1-3 per cent., as three dollars are the dues there with a temporary increase for current year to meet unusually high charges to four dollars. The question of the societies' ability to stand this financial strain must be considered. To plunge a society into debt to further a cause however praiseworthy is not good business policy, and necessarily means the beginning of the end.

So far as we can make out the best that can be hoped for by the plan is the creation of a fund of about $5,000. This is to be used for propagandist purposes. Those who are furthering the plan appear to be idealists, for, asked for an example of the work to be done, they instanced going to the assistance of the New York College in its late troubles by sending out men to create a sentiment throughout New York State that the college might be rescued. Six campaigners and a two weeks' tour was suggested as about right. This means traveling expenses and board for 102 days at probably ten dollars per day. And then New York pulled out of its troubles without any outside help. Hahnemann, of Philadelphia, had its

troubles ten years ago, and has, without help from the outside, become more prosperous than ever.

Then it was suggested that we might create a post-graduate school, as if such an institution could be started on less than $100,000 with a more probable maximum of $500,000. New York wants $50,000,000 to perfect an organization of post-graduate schools and research laboratories.

Another idea advanced was the sending out of a field worker to organize societies where such no longer exist or never have existed. We do not think much of this because man is essentially a social being, and whenever and wherever there is an opportunity for him to form organizations based upon kindred feelings, such organizations are bound to be perfected.

To get down to concrete facts, the main point at present is federation and the contribution of a dollar per capita. The purposes of that money will come later when the Congress of States meets. It is definitely understood in the formation of the federation that no act interfering with the organization or freedom of the participating societies will be sanctioned. It is proposed that the Congress shall consist of three members from each of the State Societies, making its total membership 102. It was also suggested that these delegates shall have their expenses in attendance upon the meetings paid. Let the average of the expenses be $40 per member and we have gotten rid of $4,080.00. It was definitely decided that the Congress should have full control of the Federation and its affairs independently of the Institute. Will a large body of this character be able to direct a co-ordinate enterprise?

We believe that the profession does not want that kind of a federation. It would like to have a uniform or stated fee that would make physicians members of county, state and national societies. Here we come to something practical, but very difficult of elaboration. In the small State societies, the annual dues are but one or two dollars. In the larger ones, five dollars is the fee. There are 48 States in the Union, of which 34 have State societies. There are only 52 county or district societies in the country, and of these, 24 are in New York and Pennsylvania. It is readily seen that the establishing of a uniform fee the country over appears to be impossible. There can be no question about the fact that any arrangement by reason of which homœopathic physicians can become

members of their local, State and national organizations will become immensely popular, and will unquestionably lead to sufficient accession of new members to warrant the effort to bring it about. We do not believe that the first step in the proceedings should come from the Institute, but from the State and county societies. The latter know local conditions best, and can make the best and most equitable arrangements. At the Ohio State meeting, it was stated that the combined fees should not exceed the sum of the dues physicians are now paying for "the same services."

There seems to be a feeling, moreover, among our physicians that we should also be able to secure, as the result of the federation, a certain amount of legal protection, such as is given the members of the old school societies. In fact, it is promised that this will be one of the first steps taken by the Congress. Most of us are now paying a high figure for this item alone, and we are assured that it will be made larger next year.

Prior to the State Society meeting there will be a conference by the trustees on which occasion the whole question will be considered most carefully that the plan may be presented to the Society for its definite approval or rejection. One thing, however, is certain, that with 31 societies already alleged to be in the Federation, it is unquestionably churlishness for the other three to remain out. Personally, we believe that it will be a much more expensive proposition than its promoters expect, and that lack of funds will be its great obstacle to success.

An arrangement by which physicians may become members of their three societies, we believe will succeed; but we should not obscure it by high sounding names. We pay our cash, and if we are in good professional standing, we buy our membership with its attendant privileges.

State Societies are managed according to different economical standards. Pennsylvania has a well organized society; indeed, it may be said to be the best of any State medical society in the country, barring none. It has reached a high standing by the unselfishness of its officers and members, all of whom have from the beginning tendered and performed their services without remuneration of any kind whatsoever.

If the Institute needs additional money for certain definite purposes, then let its management come out boldly and ask for

it without incurring the fears among prosperous organizations that their utility may be impaired by high sounding titles. Pennsylvania has it to give, and will give cheerfully as it always has done. It has a prosperous journal which, unlike that of the New York State Society (old school), is able to maintain an exchange list without crying poverty. A League of Nations is in theory at least a good thing for peace; we all pray for it; but there are some who fear it may breed new troubles worse than those it is designed to remedy. What will a Federation or Congress of States do? "Wheels within wheels" never were popular or efficient.

Since the above was written the Journal of the American Institute of Homœopathy has been received. From this number we clip the following as the final report of the Congress of States:

I. By-Laws. Article Five. Congress of States.

At 4 P. M. on the Sunday immediately preceding the session of the Institute there shall be held a preliminary meeting of what shall be known as a Congress of States and the business session of the third morning of each annual meeting of the Institute shall be given over to this same Congress of States which shall consist of three delegates from every State Homœopathic Medical Society. Every such delegate must be a member of the Institute.

This Congress shall choose its own officers and make its own governing rules, subject to the prescribed regulations of the Institute.

Its functions shall be to recommend uniform standards of membership in homœopathic societies; to consider matters relating to medical legislation—national, state and local; to propose means for improving the economic conditions of the medical profession and for relieving the necessities of the various state organizations and to consider such matters as may be referred to it by the Institute or its Trustees.

II. On motion, the amount of $1.00 per capita was fixed upon to be paid to the A. I. H. by the State Societies for every member of the same who is in good standing.

III. On motion, it was agreed that the various delegates shall have the power to present to the Congress of States the necessities of the various state organizations. The Congress of States after consideration of these questions, shall recommend that the Institute take such action upon them as it deems necessary.

IV. On motion, it was recommended that the Chairman of the Executive Committee write an editorial covering points explanatory of the aims and purposes of Federation and especially showing that it is not the purpose of the Institute in any way to usurp the rights or prerogatives of the State Societies.

V. On motion, it was agreed that three delegates from each State Society should be elected for a term of three years, one of whom should hold office for one year, one for two years and one for three years.

At a second meeting of the committee on June 17th, the following additional recommendations were adopted:

VI. That we recommend to the Congress of States that all hospitals be urged to publish a small pamphlet at regular intervals to set forth their utility to the community.

VII. Furthermore, that we look with sympathy and co-operation toward a nation-wide campaign of publicity to be conducted by patrons of Homœopathy and that we urge upon the Board of Trustees that a permanent paid press agent be secured as soon as possible.

VIII. That we recommend that no power to nominate officers of the Institute shall be vested in the Congress of States.

IX. That we recommend the appointment of a committee to formulate a plan for the uniform legal defense of our members throughout the United States.

X. That the Institute be requested to establish a Department of Congress of States in the "Journal of the A. I. H." with an Associate Editor for every State Society who shall furnish news from their respective states.

XI. On motion, it was agreed that we recommend to the Congress of States that by the adoption of the above motions, Federation may now be considered as an accomplished fact.

In further study of the situation we note that the Central Committee in Chicago has failed to state not only the special works to be undertaken but also the estimated costs for the same. In other words they have failed to apply the budget system. Again we note that State Societies have failed to grasp the financial status of the situation. They likewise have not applied the budget system. It is one thing to make a contribution of several hundred dollars from a plethoric treasury, and another for a Society to bind itself to pay a large sum of money annually in perpetuity. The latter is what the Societies are asked to do.

So far as the Societies with small annual dues are concerned the raising of the money is a very simple matter. For example, one Society, the annual dues of which were $2.00, promptly voted to raise them to $3.00 per annum. When, however, the Society dues amount already to $5.00 per annum and this annual budget shows expenses of $4.25, but 75 cents remains for incidental expenses which necessarily vary from year to year. It is very plain that such Societies cannot assume the extra fixed charge without raising the dues. It is also plain that any raise in Society dues of over $5.00 per

annum is not to be considered for a single moment. It so happens that the societies that are the most prosperous are the ones with $5.00 dues. In a case of active organizations doing a large amount of work, expenses per capita increase with the number of members up to a definite point, after which there is shown a healthy per capita decrease. Not one of our Homœopathic Societies has as yet attained the latter distinction.

SHALL SALARIED PHYSICIANS UNIONIZE?

A SHORT paragraph in the daily papers announced that a movement was on foot among physicians holding salaried positions to form a union subsidiary to the American Federation of Labor. This piece of news did not impress us forcibly at first, as we regarded it as a product of the lively imagination of some space writer preparing for some greater sensation later in the season. But when we thought of existing conditions, we were forced to admit that there might be something in it of a serious character.

The situation among salaried physicians at the present time may be stated as follows: These men are not paid as well as the value of their services demand. The employing powers include governments, corporations, and private individuals. Under the systems in vogue in the various organizations, the employed physicians attain a high degree of skill along special lines, making them better fitted each year for the positions they hold, and less adapted to general medical practice. The lives and health of thousands of industrial workers are entrusted to them. Their responsibility is second to none. Certain corporations are now as they always have been in the market for employing skilled services at prices seldom commensurate with the ability required, and at times in their niggardliness going to the extreme of obtaining employing physicians possessing scant medical and surgical knowledge. Numerous protests have been made from time to time concerning the situation but these have not amounted to anything because as soon as a position was vacated, there always have been available some men holding diplomas who stood ready to take the job at any price offered. Many times it has been suggested that physicians should form a protective association to combat the evil. Such suggestions were never adopted because it was recognized that the few men likely to join it could not exert any great degree of influence. Now

comes the proposition to form such an association affiliated with the American Federation of Labor; and behold, we have an entirely new proposition. Labor is strongly interested in the question of medical efficiency, for good health brings with it increased earning capacity. Some short sighted employers of medical labor have not been backward in forcing a movement looking to the legalizing of a class of second rate physicians to hold salaried industrial and official positions.

In board of health and school positions, the salaries have been notoriously small; and yet there are three or four applicants for every vacancy.

It now appears as though an attempt will be made to remedy the difficulty by unionizing physicians and securing the co-operation of the Federation of Labor. The move may appear to be inappropriate, but inasmuch as it concerns the interests of the laboring man and his children in a vital manner, it may not be so chimerical as it appears to be at first sight.

Some few months ago, the physicians engaged in one of the departments of a large city contemplated a strike for a well deserved advance of pay. The strike was called off because its participants were made to feel that it could not succeed, and that for every physician who resigned there were two applicants for the vacancy thus created.

ACIDOSIS IN THE NEW-BORN.

The Diseases of the New-Born is a chapter in pediatrics which still presents many unsolved problems and which offers many opportunities to the trained investigator. Many times as we look around for some concrete pathological disturbance upon which to fasten the responsibility as a cause of death when called upon to make out a death certificate we do not even gain help from the pathologist, although he has had the opportunity of making an autopsy. Pathologic states which can cause death without producing physical signs or gross pathological lesions offer a fascinating field for investigation and deserve our closest attention and study. Acidosis, or acid autointoxication has of late years been recognized as a condition frequently accompanying severe gastrointestinal disturbances in infancy and there is no doubt that many deaths resulting from such disturbances are to be attributed to the associ-

ated acidosis. Any contributions to the study of acidosis in children are, therefore, most welcome.

Ylippo in 1914 made a careful study of the urine, alveolar air and blood serum of the new-born infant, and as a result of his investigations he determined that a state of "physiologic acidosis" existed. Howland and Marriott later demonstrated the occurrence of acidosis with infantile diarrhoea. The alimentary intoxication of Finkelstein, as Howland has shown, is in reality an acidosis.

Recently Max Seham (*Amer. Jour. Diseases of Children*, July, '19) reported the results of his investigations into the acidotic state of normal new-borns. One hundred and fifty-one determinations were made on fifty normal babies. Seham's findings are interesting in that they do not substantiate the conclusions reached by Ylippo. His conclusions are as follows:

A lower CO_2 tension which is indicative of the so-called acidotic state was not established. The ingestion of food or starvation has no constant demonstrable effect on the alveolar air CO_2 tension.

The urine of the normal new-born infant is nearly always acid. Acetone is practically never found.

It takes on an average 1.7 gm. of sodium bicarbonate to turn the urine from acid into alkaline. Results with the alkaline tolerance test for normal new-borns do not indicate an acidosis. C. S. R.

THE OHIO SOCIETY AND THE POLYCREST.

The *Polycrest*, which has hitherto been identified almost exclusively with the Homœopathic Department of the State University at Columbus, Ohio, has passed to the ownership of the State Society, and will hereafter represent all interests of the State so far as homœopathy is concerned. The editorial staff of the journal has not yet been announced.

The State Society of Ohio is to be congratulated in assuming charge of a journal already established and which has withstood the hardships of war-time publications generally. While we regret losing Dr. Hinsdale from the editorial fold, we are sure that the profession will reap an advantage as the change will give Dr. Hinsdale more time for his experimental work in drug action, for which he is eminently well fitted.

THE PENNSYLVANIA STATE SOCIETY MEETING.

We have already announced in these pages that it is expected that the coming meeting of the Homœopathic Medical Society of the State of Pennsylvania, to be held in Philadelphia on September 16th to 18th, inclusive, bids fair to eclipse in importance and interest any of its predecessors. This means, of course, that we expect a large attendance. We would impress upon members the importance of securing hotel accommodations in advance. The Knights Templar will hold their national conclave in Philadelphia during the week of September 8th to 13th, inclusive, at which time there is expected an influx of 40,000 Knights, many attended by their families. A certain proportion of these is likely to remain over several days. Although Philadelphia has large hotel accommodations, the conditions existing during the week of September 15th will be above normal, so far as a demand for hotel entertainment is concerned. It is, therefore, enjoined upon members and visitors alike the advisability of communicating with Dr. William C. Hunsicker, 1625 Race street, Chairman of the Entertainment Committee, and he will secure the desired reservations.

It is important that we shall enroll upon our membership list as many new names as possible. Already we have about 75 new applicants, which, in view of the present large membership of the Society, is a very satisfactory beginning. All members of the Society are requested to constitute themselves part of the committee on new members, and work like beavers to increase our roll. It is very important to do this now, for we shall publish our list of members this year and it is desirable to have as large an enrollment as possible.

Non-members are apt to say: "Membership in societies does me no good," or "What do I get out of it?" "Societies are run by rings or cliques," "The society does not teach me anything," "Societies are not run in the right way," etc., etc. Here are our answers: (1) While you may not get anything out of it, the State Society has been your professional salvation. It has stood between you and pernicious medical laws, which, if they had been enacted, would have destroyed your living. The members of the State Society have paid the bills; and you have reaped the benefit along with those who have paid. (2) You get out of the societies all the benefits of asso-

ciation with a first class body of medical men and women; besides you are helping to pay for the benefits conferred on the profession by the Society. You help to complete our organization, which is very important to you personally. (3) Yes, societies are run by rings and cliques, politely known as organization. This cannot be helped. The ring, however, is not large enough. The societies need workers, and need them badly. Anybody willing to work can join the ring, so join the Society, work and become part of the governing ring. All action is productive if energized by popular sentiment. A ring not backed by such sentiment is soon broken. If not the society dies of inanition. (4) If attendance upon a society or association does not teach a physician, then he is hopeless. As a matter of fact, each and every one of us, *however enlightened or learned, can derive knowledge from every other doctor he meets.* This is a well attested aphorism. (5) Get into the Society. If you are right in your views, you will find many others to agree with you. You only have to start a good movement, and it will be carried. Right always triumphs, although it sometimes may have a hard or long road to travel. The harder and the longer the time the greater and more glorious the victory.

Addendum to Editorial on Federation.

August 30th—Just as our last forms go to press, we receive word from our printer, who has had charge of the "Hahnemannian" for many years, that he is obliged to make a horizontal advance in his charges to us of 25 per cent. This makes a total increase during the past ten years of 100 per cent. Fortunately we can meet it and survive. The practical point, however, under existing circumstances is to avoid new enterprises until conditions have become more settled. We must take care of our present organization. It would, therefore, appear to be incumbent upon our Society to decline to bind itself to the expense attendant upon "Federation." It is a good plan for us to "side-step" our action for a time, not neglecting an expression of good will. The fundamental principle of the "Federation" is that the strong shall take care of the weak, but not by force of legislation, but for love of general advancement. The strain of supporting the Federation will fall upon the societies of Illinois, Massachusetts, New York, Pennsylvania and Ohio. The latter Society, when it met last spring, authorized the raising of a fund of $2,000 by private subscription, said fund to be used for propaganda and organization within the State.

Unquestionably, Federation is a good thing, but we should not rush into it during these troublous times, when the day knows not what the morrow will bring forth.

GLEANINGS

MEDICINE

Conducted by Clarence Bartlett, M. D.

Ptomain Poisoning.—It is a regrettable fact, yet none the less true, that in most cases when we are uncertain concerning a diagnosis we fall back on "blanket" terms such as "autointoxication," "sciatica," "disturbances of the automatic nervous system," and "ptomain poisoning." Alvarez aptly points out that "fashions in this cloak of ignorance change just as they do in wearing apparel." Further study of such diagnosis usually shows that many specific etiologic factors have been wrongly incorporated under one term. Particularly does this seem to be true in the case of "ptomain poisoning" as pointed out in a recent article by Dr. M. J. Rosenau.

This author is convinced that the diagnosis "ptomain poisoning" is never justified, that it lacks precision, and that it is synonymous with uncertainty. It is pointed out that the word "ptomain" was first used in 1873 by Selmi to designate certain products of putrefaction which, at that time, were included in the animal alkaloids; that since 1873 many attempts have been made to identify "ptomains," the most recent definition being suggested by Vaughan, who described them as intermediate cleavage products of protein decomposition.

Split products of protein putrefaction are comparatively easy to isolate, and some of them, when injected parentally, have been shown to be poisonous, but, so far, none of them have been demonstrated to be harmful when taken by the mouth. These products are usually isolated from what is in a state of putrefaction far past the edible stage, and in addition it should also be noted that chemists are rarely sure of their purity even when obtained in the crystalline form. Most of them are amins and are not poisonous at all, or at least no more so than the corresponding ammonia salts. For these reasons the chemical search for protein fractions as the cause of food poisoning has been almost abandoned.

Many outbreaks reported as "ptomain poisoning" have been investigated in the Department of Preventive Medicine and Hygiene of the Harvard Medical School. In only a small residue of their casses have they found it impossible to demonstrate a definite etiologic factor, and in these cases the symptoms were very mild and transient. Among the ailments which were diagnosed "ptomain poisoning" may be mentioned bacillary dysentry, oxalic acid poisoning, over dosage of potassium nitrate, food idiosyncracies or anaphylactic reactions, heat exhaustion, food indiscretions, tartar emetic poisoning, uremia apparently due to neoplasm, nervous diarrhea, botulism, and various bacterial infections.

From these observations it must be perfectly clear that not only is the term "ptomain poisoning" vague and indefinite, but, in addition, an actual misnomer. As suggested in the article quoted above, it would seem to be a

great step forward if the profession would discontinue the use of the term and let the diagnosis stand as "gastro-enteritis of unknown origin," much as the British use the term "Pyrexia of unknown origin" (P. U. O.) for fevers the cause of which is undetermined.—*Boston Medical and Surgical Journal.*

Post-Influenzal Psychoses.—Dr. Egbert W. Fell summarizes his experiences at the Walter Reed Hospital as follows:

1. In an epidemic of influenza of average severity, occurring in soldiers who were for the most part between the ages of 20 and 30, only four of 2,500 cases treated at Walter Reed General Hospital developed psychoses of a severe type which outlasted the acute disease.

2. Twenty cases of post-influenzal psychoses have, all told, been treated in the psychiatric wards of this hospital. They fall into three fairly distinct groups: Manic-depressive group, eight cases; infective psychosis group, seven cases; dementia praecox group, five cases.

3. Predisposition as shown by the family or the personal history was only marked in the manic-depressive group.

4. There is a sufficient overlapping of the groups to give, when considered as a series, a graduation from a simple depression to hebephrenic praecox of the depressed type. The chief characteristic of the series is: A foundation of depression on which develops sense falsifications, confusion and schizophrenic symptoms.

5. The occurrence of praecox symptoms is not a sure indication of permanency, but such cases run a longer course and recovery is less likely.

6. The most common symptom was depression. Hallucinations seemed to be entirely absent in seven cases.—*Journal of the American Medical Association,* June 7, 1919.

Value of Physical Examination in the Diagnosis of Early Pulmonary Tuberculosis.—Hamman of Baltimore contributes a paper that is significant because it illustrates the shifting viewpoint of the clinician as regards tuberculosis. He begins by asking the question of just what is to be diagnosed,—just what is to be meant by pulmonary tuberculosis. Pulmonary changes, the results of (old, long-died-out) tuberculous infection, have but a secondary interest for physicians. As isolated clinical manifestations they bespeak infection, not disease, and the distinction between infection and disease when such signs are the only evidence of pulmonary change, rests on data other than those furnished by percussion and auscultation. They are important in diagnosis because so frequently they are erroneously interpreted to indicate tuberculous disease. It is impossible to put an absolute value on physical examination in diagnosis. It really takes its value from the relations of all the other associated clinical facts. Hamman would make only one exception to this general statement and that in favor of rales. Definite moist rales, limited to an apex, are almost an absolute indication of pulmonary tuberculosis, provided the general evidence points to the presence of the disease. The author furthermore inclines to the belief that the liability to develop active pulmonary tuberculosis is not directly proportionate to the extent of pulmonary involvement.—*American Review of Tuberculosis,* June, 1919.

Recent Studies on Experimental Meningitis in the Army Neuro-Surgical Laboratory by Wegenfarth and Latham have demonstrated that the release of cerebral spinal fluid during certain artificial septicemias with animals had been followed by a localization of the infection within the meninges. It is found clinically that infections of the meninges occur not infrequently following the release of normal spinal fluid by lumbar puncture during a septicemia. Five such observations have been made personally and similar cases have been found in the literature. The close analogy existing between these cases and certain experimental observations indicate that the withdrawal of the spinal fluid should seriously be considered as a causative factor in the production of meningitis under certain conditions. To prevent the possible accidental production of meningitis as a result of a diagnostic lumbar puncture it is recommended (1) that careful consideration be given the bacteriological study of the blood before such punctures are attempted; (2) that in acute disease, in the absence of definite signs of irritation of the central nervous system, lumbar puncture should be avoided unless it is first conclusively shown that the blood stream is free of infection; (3) that when the clinical symptoms are such as to render a lumbar puncture advisable, minimal quantities of fluid should be withdrawn, sufficient only to permit necessary laboratory tests to be made; (4) that small bore needles should be used in performing the operation to prevent as much as possible subsequent leakage of spinal fluid into the surrounding tissues.—*The American Journal of the Medical Sciences*, August, 1919.

Treatment of Pruritus Ani by Ionic Medication.—Rolfe used two solutions in the treatment of pruritus ani: a 2% solution of zinc chloride in distilled water and Lugol's solution of iodine.

The patient is placed in the right Sims position with legs well drawn up. The large felt covered electrode, wet with a 3% solution of sodium chloride, is slipped under the right buttock and connected with either the negative or positive wire, depending upon whether a zinc or iodine solution is to be used.

It is important to place the active electrode in position before allowing the current to flow through the milliammeter, and also equally important to return the needle of the meter to 0 before removing the electrode for any purpose. By observing this precaution the patient will not experience any unpleasant sensation.

Cases showing a moist, macerated condition of the skin are treated for the first two or three times by application of the active electrode well saturated with a 2% zinc solution and connected with the positive cord. This preliminary treatment has a stimulating effect on the skin, which becomes somewhat moist and presents a more healthy appearance. After two or three applications, each of which should last 15 or 20 minutes, Lugol's solution of iodine is used, diluted with 4 parts of distilled water. This is applied with the negative pole and continued in subsequent treatments in gradually increasing strength as the skin becomes more and more tolerant, until such time as the undiluted solution can be employed.

As iodine ions penetrate deeper and at a faster rate than the zinc ions the time of application can be reduced to about one-half that of the zinc solution. It is well to begin treatments with a mild current of perhaps 2 or 3 milliamperes, gradually increasing the amount until the patient begins to

complain of a warm sensation. There is no need of causing pain and the amperage should be kept below the painful or so-called irritation point.

Cases presenting a dry, thickened, parchment-like condition of the skin are treated from the beginning with diluted iodine solution, the strength of which is gradually increased in the manner already stated.

The applications should be given at least twice weekly and three times would be better unless the skin shows signs of irritation, which is to be avoided if possible, either by prolonging the interval between treatments, or using the solution in a much more diluted form.

The number of the applications necessary varies with the chronicity of the case, the long standing one requiring more. It is well to continue the treatments for two or three weeks after the disappearance of the pruritus but once or twice a week will be sufficient.—*Boston Medical and Surgical Journal*, August 14, 1919.

Forms and Treatment of Bronchopulmonary Syphilis.—(Plique *J. de Med. et de Chir. Prac.*) In congenital syphilis the lungs are affected with nearly the frequency of the bones. Functional disturbances comprise dyspnea, paroxysms of coughing, hemoptysis—which is very rare—and intermittent fever which is quite common. Defervescence occurs during the night and is accompanied by profuse perspiration. The patient's tolerance is remarkable especially in tertiary syphilitic fever. In children with congenital syphilis, tracheobronchial adenopathy is generally of specific origin. The disease usually appears in the lungs about the fifth year; this is constituting a late stage, but numerous cases are on record in which lesions have appeared in the early years and even the early months of life. On the other hand, the late form may not appear until adolescence. The lesions to which the author refers are gummatous, in part, but the usual chronic affections of the chest may also be closely simulated, as cavitary tuberculosis, sclerosis of the lung and bronchiectasis, while a diffuse chronic pneumonia is also described.

In chronic pulmonary affections the absence of tubercle bacilli in the sputum, a positive seroreaction and the coexistent clinical evidences or history of syphilis are valuable aids to diagnosis. It must not be overlooked, however, that tuberculosis may attack a syphilitic lung. In these chronic syphilitic pneumopathies the course is long, lasting for years, perhaps, when untreated. Specific medication often works wonders in these cases, but it must be remembered that spontaneous cure is not unknown.—*American Journal of Syphilis*, July, 1919.

The Cardiovascular Defective.—Warfield presents the following conclusions: There is a class of young men of usually healthy appearance who nevertheless suffer from a group of symptoms following mild exercise characterized by breathlessness, precordial pain, dizziness, palpitation and exhaustion. There may also be headache, sleeplessness, cold, clammy hands and feet and profuse sweating. These men might never have been discovered except for the army draft, which caused thousands of young men to be examined physically. These men have no complaints as a rule, which lead them to seek medical advice. They find that they are better able to make a living at a light sedentary work than at hard work, so they drift into the lighter occupations. The majority are surprised when told that there is something really the matter with them, although they have recognized the

fact that they cannot take the violent exercise which other men of their acquaintance can take. A certain number are taken by their parents to a doctor, who may diagnose heart disease or neurasthenia.

There is no common etiological factor among the true cardiovascular—no cause can be found except a constitutional inferiority, a poor quality of tissue which must be supposed to account for the syndrome. Among others certain chronic diseases or the results of severe acute illness are responsible for the syndrome.

When there is a definite pathological basis, such as pulmonary tuberculosis or chronic focal infection, etc., cure of the disease causes the effort syndrome to disappear. Cases resulting from infectious disease or based upon constitutional inferiority do not improve in our experience.

Exercise was valuable in determining the fitness of the men for military duty and in giving data in the diagnosis of certain cases suspected of being tuberculosis. The cases were studied primarily for the purpose of sorting the fit from the unfit in military service.—*American Journal of Medical Sciences*, August, 1919.

The Medical Treatment of Duodenal Ulcer.—Frank Foxworthy divides the dietary treatment of this condition into five parts: 1. The nutrient enema period, lasting from four to seven days. This should be begun at once after diagnosis, or following hemorrhage. 2. The liquid or albumen water period, from one to two weeks, commencing with the whites of two eggs in water every three hours and increasing gradually. Cream is used when eggs do not agree. 3. The semi-liquid period, one week, in which regular feedings of albumen water are kept up, substituting for certain feedings such food as creamed toast, potato soup, and purees. 4. The semi-solid period, lasting one week which is a prolongation of the semi-liquid period, during which oatmeal, mashed potatoes, tapioca, custards, soft boiled or soft poached eggs are added to the dietary. During this period albumen water may be safely withdrawn, although at any indication of recurrence, the diet should drop back to the diet of the second period—albumen water only. 5. The solid food period, broiled meat patties, the meat, lean only, ground very fine, broiled squab, breast of chicken minced, following which the patient should be able to take the ordinary diet for ambulatory ulcer patients, which is a maximum of albumens and a minimum of starches and sugars.—*Journal of the Indiana State Medical Association*, June 15, 1919.

NEUROLOGY

Conducted by Weston D. Bayley, M.D.

The Neurology of Cervical Ribs.—Archibald Church, M. D., Chicago, writes on the subject of adventitious cervical ribs; the frequency of which "is much greater than is usually understood." Of course many such cases are symptomless, and in any event, symptoms "commonly appear only after the end of the first decade of life." Occasionally a traumatism is the added factor in bringing on a complaint from this source. Apical tuberculosis has been found in frequent association with cervical ribs. Nerves exposed to the disadvantage of passing over an additional rib have shown special vulnerability under general systemic toxic conditions. A radiogram will show them, "but a certain amount of experience is necessary in interpreting the plates."

Peripheral circulation in the arm is frequently disturbed and some cases of Raynaud's disease have this basic cause. Sensory disturbances are much more common, and general or local pain is usual. Sensory dissociation has been observed, simulating syringomyelia. Muscular weakness is common and contractures (claw hand) may be present. Trophic disturbances in the muscles of the hand and forearm are common, and with this may be found the various trophic disturbances of the skin. "In quite a number of cases, hoarseness is reported." Cervical scoliosis is not infrequently present. In all cases of painful disturbance or muscular weakness in the arm, even those which might seem to have actual cord origin, this condition should be excluded before final diagnosis is made.

In the milder cases conservative treatment is altogether advisable, but in those of more pronounced grade, surgery is essential. The extirpation of a cervical rib "is one of the most difficult of major surgical measures, and must not be lightly undertaken."—*Journal of the American Medical Association*, July 5, 1919.

A Word to the General Practitioner Regarding Tonsils and Teeth.—Weinberger in the *Penna. Medical Journal* for Feb. 1919, has an article on "The Chronic Tonsil." By this he means a tonsil the seat of chronic disease. In a few words he says volumes of importance to the everyday doctor; and since the same remarks are equally applicable to teeth, we take the liberty of extending his observations precisely into this contiguous field. Furthermore, neurology claims a limited jurisdiction here, since it is more closely interwoven with general practice than any other specialty. "The far too common practice of hurriedly, superficially and irresponsibly looking into patients' throats . . . . and giving advice, is doubly unfortunate since, without thorough scrutiny of local manifestations . . . . offending tonsils may escape and unoffending ones be sacrificed." The size of a tonsil is of no consequence. It is impossible to obtain a true conception of the condition of a tonsil without investigating the crypts. The most innocent looking tonsil may be the greatest offender. (Similarly a good looking tooth or an artistic piece of bridgework.) Local results of tonsillar disease are to be found in morbid conditions of the mouth, teeth, throat, ear and neck. General conditions therefrom are the remoter toxaemias—so-called "rheumatism," neuritis, tubercular lesions, thyroid diseases, gastro-intestinal diseases, infectious heart disease, nephritis, cholecystitis and the like.

In other words, the doctor in his office should continually bear in mind the established fact that tonsils (and teeth) are the gateways of infection to even the most remote tissues and organs of the body; and the appearance of the tonsil (or tooth) has nothing to do with the virulence of the invading micro-organism. A Jewish saint may walk through the gateway of Granada, or a tiger!

Departing from the gleaning (which is here taken only as a text) the compiler has been thoroughly impressed with the great importance of this still neglected subject. Intractible neuritides, "rheumatism," chronic backache, and general ill-health, have many times been traced back to tonsils and roots of teeth which harbored infections capable of causing these more distant phenomena. The doctor who is not alert to this fact is already harboring on his person some of the mould of medical senility.

GYNECOLOGY AND OBSTETRICS

Conducted by Norman S. Betts, M. D.

The Radical Cure of Pelvic Deformity.—Jellett (*Surgery, Gynecology and Obstetrics*. August, 1919) makes a strong plea for the more general practice of pubiotomy by obstetricians in cases of pelvic contraction. In his paper he desires to prove the following points. First, that pubiotomy is not merely a method of terminating a difficult labor, it is rather a means of effecting a radical cure of pelvic contraction. Second, that it is indicated in both the first and second degrees of pelvic contraction. Third, that it is not an alternative to Cæsarean section any more than the wiring of a fractured bone is an alternative to amputation of the limb. Fourth, that it should never be postponed willingly to the end of the second stage but should ideally be carried out independently of pregnancy, when its effects are likely to be required. Fifth, that every effort should be made to avoid bony union of the cut surfaces. The author presents a table of statistics of 35 operations performed at the Rotunda Hospital, Dublin. Two women died, the first of heart failure after delivery (proved at autopsy), the second died some weeks after delivery of acute miliary tuberculosis. Five children out of 36 were born dead. One of these, the second of twins, was hydrocephalic. In two cases injury to the bladder wall resulted. Every patient except the two who died left the hospital in perfect health and with no impairment of the power of walking.

Trendelenburg Anesthesia in Surgery of the Pelvis.—Guthrie (*Journal of A. M. A.*, August 9, 1919) draws attention to the advantages of placing patients in the Trendelenburg position before beginning anesthesia for operations on the lower abdominal viscera. By his technique there is a minimum of trauma to the small intestines and a lessened tendency to post-operative ileus and shock. Briefly, the object of the method is to rid the pelvis of as much of the small intestine as possible before the abdomen is opened for an operation in the pelvis. It is best employed for ether anesthesia, although he has used it with a fair degree of success during gas-oxygen anesthesia. The anesthetic is started with the patient in the high Trendelenburg position on the table which is to be used for the operation. An anesthetist who is well trained in suggestion is necessary for the objections to the method are that it may frighten the patient and that the position may be uncomfortable. To wait until the patient is fully anesthetized and then change the position does not so thoroughly free the pelvis of small intestine. If the method is properly carried out and the patient has not strained or coughed while going to sleep it is usual to find only a coil or two of small intestine in the pelvis, provided, of course, that the intestine is not adherent to pelvic structures. Through a small opening in the peritoneum two fingers of the right hand are inserted into the cavity and the abdominal walls are well lifted up. The inrushing air will cause any coils of intestine which remain in the pelvis to slide upward, so that it is usually necessary to employ only one small gauze square to get excellent exposure.

CLINICO-PATHOLOGICAL SOCIETY OF PHILADELPHIA

Reported by J. V. F. Clay, M.D.

Penetrating Bullet Wound of Brain.—A. B. Webster, M.D. Patient was brought to Hahnemann Hospital with penetrating bullet wound of the brain—entrance on a level with the lobe of right ear, one-half inch toward the median line, and exit through the right occipital bone. The brain tissue was found on point of entrance and exit. He was in a desperate condition, with pulse 40, temperature 95 and respiration 15. It was decided to stimulate and await reaction before doing anything surgical. About six hours later patient was in much better shape, and an operation was decided upon. The next day after operation the pulse was good quality, and he was able to say a few words. In twenty-four hours' time he was conscious, and his mind was perfectly clear. From this time he went on making a complete recovery. The X-ray plates taken before and after he left the hospital show fragment of bullet just under skull at point of entrance, and trace of bullet through the brain tissue. This case is very interesting from the fact that he shows no ill effects from his brain injury, and the neurological findings are negative.

Hernia of Ileum Through Sigmoid.—A. B. Webster, M.D. Patient came into "Owl Clinic" with about two feet of ileum outside rectum. She was operated on immediately. The intestine that was protruding was thoroughly cleansed, and the ileum reduced through rectum. After reduction, no wound, not even a scratch was found around the rectum, but after everting rectum, an opening was found about three inches up, through which the ileum passed. This was very easily sutured with two-layer suture, after the reduction had been complete. In looking over records, am unable to find any case similar to this.

An Unusual Case of Influenza.—G. M. Golden, M.D. Male, 24; family history negative. Personal history: No severe illnesses. Two years ago suffered from a cough, which was relieved by having adenoids and tonsils removed one year ago. Was well until two days before admission to hospital which was on October 5, 1918, during the influenza epidemic. At this time complained of chilliness, prostration, aching, moderate temperature of 101.2, pulse 84, respiration 20, at time of admission. Within three days temperature became normal and symptoms disappeared. He was allowed out of bed, three days later temperature rose to 105 degrees, distended abdomen, no rigidity, some pain, with copious hemorrhage from the intestines, on three occasions. Patient developed a typical typhoid picture. At this time Widal and Paratyphoid negative, leucocyte count 6200. Blood culture negative. Within ten days condition and temperature declined to nearly normal point, but distinct evidences of ascites could be made out. Physical examination of chest, also X-ray of chest negative to tuberculosis. Wassermann negative also. The patient had a slow convalescence and left hospital on December 5, 1919, with complete recovery. With the presence of the many negative laboratory findings and physical signs, the conclusion was reached that we were dealing with an influenzal abdomen.

Case of Focal Infection, with Hemolytic Streptococcus.—R. S. Leopold, M.D. Young man, aged 22, of intensive athletic abilities. Previous history negative, excepting distinct but mild and repeated attacks of rheuma-

tism in early years. About six years ago, following a frank attack of rheumatism, the tonsils, as the evident atria of infection, were removed. At this time he exhibited a muffled mitral murmur, which remained after convalescence, and was accentuated on exertion. Contrary to advice to avoid track competition, he entered the same, and during the following years won a great many hard middle-distance races at the certain expense of cardiac life. About the middle of 1917 the overtraining and over-exertion was followed by a general "run-down" condition, an irritable myocardium and an accentuation of the old mitral insufficiency. At this time he suddenly developed a severe streptococcic cellulitis and adenitis of the leg, following an abrasion of the foreleg by the running shoe. This was accompanied by a general severe bacteraemic and septicaemic state. A hemolytic streptococcus was present in blood culture, probably identical with the streptococcus isolated from the cellulitis. A septic endocarditis was thus engrafted on the old valvular vegetations. From this time his health became greatly impaired. He was subject to frequent attacks of arthritis, shifting myositis of every degree, from severe typical acute rheumatic fever to mild and varying types of bone and muscle pains. Giving always the same general picture of autoinfection, due to some persistent focus of infection. The severe attacks of rheumatism being always ushered in by cardiac symptoms, a tumultuous heart, precordial pain, severe dyspnoea and later a localization in some great joint. The milder types were simply diminutive of the grosser attacks. Vigorous efforts of elimination, cardiotonic, hematonic and general measures in the main failed, and a general loss in heart tone and health was progressive. On March 7 he developed an acute respiratory catarrh, which gave evidence of rapid extension toward the finer bronchioles; he became rapidly prostrated and toxic, the heart was tumultuous and resisted all efforts of control; on the third day fulminant broncho-pneumonia was clinically evident, on the fourth day a hemolytic streptococcus was present in the blood, and on the fifth day broncho-pneumonia was pathologically demonstrable, and acute cardiac decompensation with rapid pulmonary edema preceded death. Autopsy was not available.

Report of Case of Post-Operative Acidosis.—Joseph V. F. Clay, M.D. The case is that of a male child of eight years, operated under ether anaesthesia for a complete occlusion of the left nostril, due to a traumatic deviation of the nasal septum. Examination of the urine prior to operation showed nothing abnormal. The child was a placid patient, took his anaesthetic without struggle or fright. The operation, however, was tedious and lengthy, consuming one hour and forty-five minutes. The bleeding was moderate, and certainly not as much blood was shed as in the ordinary tonsil and adenoid operation. Six hours after the operation the temperature rose to 101, the pulse 100 and respiration 24, associated marked vomiting and restlessness. At seven o'clock the next morning the temperature was 103.4, the pulse 144 and respiration 28. The urine at this time showed acetone. The patient was mildly delirious, and in the absence of the nurse got out of bed. The vomiting was incessant, the child was crying constantly for water, which, when taken was immediately ejected. His face was flushed and drawn. Enteroclysis of bicarb. and glucose was instituted, and within a few hours the nervous phenomena disappeared. At 8 P. M. same day the temperature was 103, the pulse 118. The vomiting had ceased, and patient

was able to take bicarb. by mouth. A carbohydrate diet was given. The next morning, two days after operation, the urine was strongly acid, and showed acetone and diacetic acid. Two days later the urine became alkaline and showed a trace of albumin, no casts. The bicarb. was discontinued. The temperature unaccounted for continued for one week, when it gradually came to normal. A feature in this case which is new in our experience is the high temperature. We have usually observed little change in the temperature in cases of acid intoxication following operation. There was no discoverable cause for temperature elevation, and the only pathological finding was the presence of acetone and diacetic acid in the urine.

DERMATOLOGY

Conducted by Ralph Bernstein, M. D.

Elephantiasis.—Cases of elephantiasis in this climate are so rare that Wobus and Opie are led to submit the following case report:

"The patient was a woman, aged 40, a domestic, born in southern Germany, who had come to this country in early childhood and had lived in St. Louis without intermission since. She had the usual diseases of childhood, but otherwise had enjoyed good health.

"At an early age her mother experienced increasing difficulty in fitting her right shoe, because the right foot was apparently somewhat swollen. Since then the right foot had progressively enlarged, and the swelling gradually affected the leg. She was placed under the care of Dr. H. H. Summa, who had since had her under observation. He made the diagnosis of elephantiasis of unknown origin, and tried various methods of combatting it, such as bandaging with elastic bandages and potassium iodide internally. The condition became gradually worse; it became increasingly difficult to have proper footwear fitted, the muscles became progressively weaker and, with the increasing weight of the tumor, locomotion became difficult. Amputation was agreed to.

"While various operations for resection of the diseased tissue (decortification) with plastic reconstruction of the soft parts have been proposed, with apparently fair success, the extent of the trouble and the involvement of the musculature seemed to rule out this mode of procedure. Ligature of femoral artery did not seem to promise any great relief. Hence they did an amputation high enough to get into healthy tissue. Five years have now elapsed and there has been no extension of the process. The patient walks around well on her artificial leg and is happy to have been relieved of her trouble.

"Microscopically, the section offered no explanation of the cause of the trouble. The lymphatic vessels showed no dilatation, and were inconspicuous in the section. The lesion may be classed as elephantiasis dura."—*Jour. Amer. Med. Asso.*

Syphilitic Keratoderma.—H. W. Baker's case was that of a man of 50, who had had a typical chancre and secondary lesions thirty years before, and exhibited an extensive keratosis of both feet from which he had been suffering for a period of fifteen years.

A pimple appeared on the back of the left heel two years after infection. This pimple ruptured and discharged thick, black contents. Ever since the

appearance of that pimple the patient has had trouble with his feet. Twelve years subsequently, the present condition began. During a period of about five years it was limited to one foot, but after that time it developed on the other foot in a similar manner.

The patient, when first seen, gave a history of an attack of acute nephritis twenty-five years ago. However, an examination of the urine does not now disclose either albumin or casts. The feet were very edematous and were too big to get into any boots that the patient could buy. This edema had been present about fifteen years. There was slight pitting on pressure, but not nearly so much as one would expect from the amount of swelling. The edematous condition became slightly better during the night.

The soles of both feet were covered with a very thick skin of a dirty white color. It was very hard and rough. Deep cracks were to be seen at the folds of the toes, and from these cracks there exuded a slight seropurulent discharge having a very foul odor. The patient stated that at times this discharge was so profuse that it soaked through his shoes. Here and there cracks a quarter of an inch deep could be seen in the hardened epidermis, the tissue at the bottom of which was red but not ulcerated. This condition spread over the sides and top of the feet and to some extent on up the legs, on the right side reaching about half-way to the knee. On the sides and back of the feet the hyperkeratosis was more of a verrucous nature. The warts were nearly half an inch thick, and varied in area from the size of a five cent piece to a quarter. These warty growths were very tenacious, but when removed it was found that the skin under them was red and indurated.

The patient stated that for fifteen years he had suffered considerable pain in his feet; the pain being of a dull aching character most of the time, growing worse before a change of weather, and the first thing in the morning, and seemed to be "right in the bones." At night, while in bed, his feet would be so hot that he could not sleep.

About six years ago the patient had the same hyperkeratosis on the palmar surfaces of the hands. The skin at first seemed to thicken like a callus, then became hard, dry and rough and cracked at the joints. These cracks exuded a discharge similar to that from the feet. The hands were also somewhat swollen. This condition persisted for six to eight months, but at present the skin is normal in appearance without even a scar to indicate where the trouble had been.

The patient had been under almost constant treatment from the appearance of the first symptom. This treatment consisted principally of mercury and iodides. While the patient persisted in careful treatment and was in good health generally, his skin condition would improve, but his feet had not been free from swelling or hyperkeratosis in fifteen years.

The Wassermann reaction proved strongly positive and the patient immediately was given an intravenous injection of 0.6 gm. of diarsenol. About one week later he was given a similar dose and received thirteen doses altogether. At the date of the report the skin of his feet was perfectly normal, but the swelling had not completely disappeared.—*Jour. Cutan. Dis.*

MATERIA MEDICA AND THERAPEUTICS

Report of Committee on Pharmacopoeia, American Institute of Homoeopathy.—The legislation during the past year concerning alcohol should furnish convincing proof to our members that they should take an active interest in matters relating to pharmacy. Had they done so in the past, and seconded the efforts of your Committee, 1st, to require the use of your Homœopathic Pharmacopœia of the United States by every Homœopathic Pharmacist in the United States, and 2nd, in its endeavor to place our pharmacopœia in the Food and Drugs Act, both of these objects would have been accomplished and with our preparations thus properly standardized our dilutions would not now be sold under the limitations applied to pure alcohol.

Alcohol is a drug but your liberty to prescribe it in the form of brandy, whiskey, gin, sherry, claret or champagne will depend largely upon your individual opinion which should be sent at once to H. M. Gaylord, Deputy Commissioner of Internal Revenue, Washington, D. C., that there are cases in which it is necessary to prescribe each one of these liquors (mentioning each by name). If a sufficient number of physicians are of the same opinion, permission will be granted for their use. If you desire the privilege of prescribing these articles, write yourself—do not trust that the other fellow will do your work.

If you can suggest any drug which when added to alcohol will prevent its use internally or as a beverage and yet will be less objectionable for its external use than the present more or less irritating substances recommended for that purpose, please write at once to H. M. Gaylord, Deputy Commissioner of Internal Revenue, Washington, D. C.

According to the Constitution of the Commission on Revision of the United States Pharmacopœia invitations have been sent to incorporated Medical Colleges and to incorporated Medical Societies to appoint delegates to the Committee on Revision which meets in 1920.

Some of the Homœopathic Colleges have received this invitation and your chairman has been urged by three members of the commission to have the invitations accepted. He has written to the Secretary at Washington in an endeavor to find out if the invitations mean anything more than a mere formality. Should there be a real desire to have us send delegates, they should go with the understanding that their work should be to take care of our fresh plant tinctures, either by having our H. P. U. S. added to the U. S. P. (which seems almost impracticable) or else that it be adopted as a standard for fresh plant tinctures in addition to the U. S. P. and National Formulary.

On Monday, June 2nd, your chairman addressed the American Association of Pharmaceutical Chemists at Atlantic City as the delegates to that body from the American Institute of Homœopathy.

He told them that the contribution of the Homœopathic School to Pharmacy consisted in the fresh plant tinctures—that a dried plant was in some respects analogous to a dead animal and that the bacteria of decay began their work with the drying process and that frequently new products were formed that did not exist in the live fresh plant. He described the process by which these fresh plant tinctures are made of an uniform drug strength of 10 per cent. and their superiority as originally pointed out by Hahnemann

and now generally recognized. He asked their assistance in the effort to obtain a legal standard for 289 fresh plant tinctures by having the H. P. U. S. placed in the Food and Drugs Act. At the conclusion of his remarks the President, Dr. W. C. Abbott, of Chicago, said that what Dr. Carmichael has told you is the truth and Dr. F. C. Stewart, delegate from the American Pharmaceutical Association, also testified to the superior value of tinctures made from fresh plants.

This American Association of Pharmaceutical Chemists should have our support because it deals directly with physicians and not exclusively with druggists.

Its Legislative Committee did good work at Washington, when the anti-narcotic legislation was being enacted and prevented the adoption of a clause which would have required a prescription to a druggist every time a narcotic was to be administered. Your chairman took the liberty of suggesting that in the future there might be occasion where our legislative committee could work with theirs to our mutual advantage. We are credibly informed that the supply of fresh plant tinctures that formerly came from Germany, in the future may be obtained through England.

The necessities of war developed the fact that some of our fresh plant tinctures, notably belladonna, are of the same activity when made from plants grown in the United States.

In conclusion we would call attention to the Pharmacopœial Catechism written with the faint hope of arousing some interest in matters pharmacopœial which has been running in the Journal of the Institute and also to the fact that the State of New Jersey, in which we are now meeting, has placed our H. P. U. S. in its law as a standard for our preparations.

Respectfully,

T. H. CARMICHAEL, *Chairman.*

Pain in the Right Side.—Eli G. Jones offers the following suggestions: Sharp pain in the right side, worse by movement, indicates *bryonia* 3x, 5 gtts. every 3 hours. When there is a sharp cutting pain below the free ribs that catches the patient when taking a long breath, the remedy is *berberis vulgaris* 3x, 5 drops every 3 hours. Pain in right side relieved by moving about calls for *dioscorea* 3x, 10 drops every 4 hours.—*Homoeopathic Recorder*, August 15, 1919.

Pruritus.—The same authority recommends the following: Itching of the uvula in old ladies, *rhus tox.* 3x, 10 drops every 4 hours.

Itching of the vulva and anus calls for *ambra* 6x, 3 tablets three times daily.

Itching of the vagina with swelling of the labia indicates *apis mellifica* 3x, 5 drops every 2 hours.—*Homoeopathic Recorder*, August 15, 1919.

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DELIVERED BEFORE THE HOMOEOPATHIC MEDICAL SOCIETY OF PENNSYLVANIA, SEPT. 16, 1919.

BY H. S. WEAVER, M.D., PHILADELPHIA.

LADIES AND GENTLEMEN: I wish to extend a hearty welcome to all present and to express my sincere thanks to the members of the State Society for the honor they have conferred upon me in electing me President of the Pennsylvania State Homœopathic Medical Society. My thanks are the more profound, and I am more fully appreciative of this honor, because ours is the largest, best organized, and most influential State Society in the country, so that any physician chosen to act as its chief executive should feel, as I trust I do, a pardonable pride in having received what is practically a vote of confidence from a body composed of some of the best educated and most successful physicians in the United States, bar none!

I assure you that I have done my best to make this meeting both profitable and enjoyable to all who may attend it. I wish that more of the homœopathic physicians throughout the State could be made to realize what the State Society has done for them individually and personally. Had it not been for the watchful eye and the tireless efforts of some of our members who have, and always have had, the welfare of the homœopathic physicians at heart, the practice of medicine to-day would not and could not be pursued with the same freedom from objectionable limitations that you and I at present enjoy.

Many bills have been introduced into our State Legislature that, if allowed to pass, would have made the practice of homœopathic medicine an impossibility to all the members of our school who are noble-minded and conscientious physicians and that, in my humble opinion, includes every last member of our organization.

The members of our legislative committees were always on the alert, watching every move, so that our school should have equal chances with the dominant school of medicine. When we consider the benefits that have been shared by every homœopathic physician throughout the State, because of this work done by our State Society, should not every one feel that he owes that organization a debt of gratitude and should he not be glad to join the society and show his appreciation in a substantial and co-operative way? Many of our men are so engrossed in their personal work that they never take a day off for recreation or pleasure, never attend a State Society Meeting, and therefore think it useless to belong to it, or to appear among us even as visitors.

If every one could be brought to see that it is his unselfish duty to affiliate himself with our State Society there would be more pleased patients and pleasantly surprised physicians than our secretary could ever record. Whether you attend the meetings or not, we need your financial and moral support, to obtain the best results for you and for the cause of homœopathy. Be generous and be loyal! The larger our membership the more influence we can command when occasion requires.

The object of the State Society is not merely to provide a program, and a meeting place for its members, once every year; not simply to have a good time, and to interchange ideas on the practice of medicine, but more importantly, to secure a thorough organization of the profession so that physicians in all parts of the State may receive just and proper consideration. It is impossible for a group of physicians, in a large city like Philadelphia, with purely local interests, to govern their professional lives and careers, so as to understand the great and most imperative needs of one situated in another section with entirely different surroundings; therefore, laws suitable to the one condition would be entirely inadequate to the other. Would it not be wise to have these sections *grouped*, so that they would represent the manufacturing interests, the

mining interests, the agricultural interests, and the civilian population in general? If that were done, men capable of representing every one of these interests could be selected, to meet with the officers of our State Society, and to help formulate a working basis suitable to the best needs of the inhabitants of the entire State.

The homœopathic physicians, during our recent World War, demonstrated their ability as soldiers and as physicians. When examinations for promotion were required, our men stood second to none. Many of our professional brethren who differ with us in some important particulars, now speak of the two *regular schools of medicine;* thus recognizing the exceptional training that our men have had; and so intentionally, or unwittingly, acknowledging our colleges as being equal to the best they can sustain.

Homœopathy has had the long-looked-for chance to demonstrate to the world what it can do, and I am proud to say that our men were equal to the occasion, and today we have a standing in medicine never before realized. I am not aware of one homœopath being discharged from the service for inefficiency, and am proud to state that many promotions rewarded the difficult and efficient work done by our men.

Serious problems are confronting our government, and others will continue to arise during the period of reconstruction; problems, the solution of which will require efforts of the ablest and best men in the country. Medical teachers have been brought face to face with the fact that we are not graduating enough physicians properly to supply the army and the civilian population with proper attention when waves of disease overwhelm the country, as during our recent epidemic of influenza.

This society, which represents the homœopathic profession of the State of Pennsylvania, has another serious problem to solve, one in which we, as physicians, and guardians of the health of the State are vitally interested; one that will require careful consideration, because it points, as with the hand of fate, to the gradually increasing dearth of physicians throughout the length and breadth of our Commonwealth. This lack of physicians is not so perceptible in our cities as it is in the country districts, and no provision has been made to furnish to our rural friends the proper medical attention, so necessary when sickness and disease overtake them.

Visit any of the smaller towns of 500 to 2,000 inhabitants with thickly populated country surroundings, and compare the present number of physicians with that of five years ago and you will find the population increasing and the number of physicians decreasing, with no young men to take the places of the older ones who die, or are, because of age, compelled to give up their practice. This condition is a real one and it demands active and immediate consideration on the part of our medical authorities, in order to avert a serious crisis during the next ten years.

The preliminary requirements for a medical education, as they exist today, are such as to render it impossible for good, conscientious, and industrious young men from the country to enter upon the profession and practice of medicine. In the past, many of these young men have, by their natural ability, industrious habits and conscientious work, climbed to the very pinnacle of the profession. We can all name them by the score. And now what chance have such young men; hedged about, as they are, by unreasonable rules and regulations; by restrictions that stifle personal ability and willingness to work, and subject them to the carrying of an almost hopeless financial burden? You may prate as you please about educated physicians, our present State laws are such as to place a premium upon personal means, and a tax upon horse sense, earnest effort and native ability. I expect many of you to differ with me and from me, but I do *not* think that any one present expects me to tell other than that which I conceive to be the truth.

A medical education today can be attained only by young men with some financial backing. We, therefore, lose many of those who in former years were our best students, young men who, when graduated, were ready and willing to do the necessary work to perfect them in the practice of medicine. Clinical research work offered more enjoyment to those men than an afternoon tea or any other social function, and as a result they rapidly rose to the top of their chosen profession.

It is a loss to the profession not to have more of these healthy minds take up the study of medicine. Many of them are driven to other walks in life by our preliminary requirements.

Too much college life, in many instances, has handicapped the individual, has prevented him from making a success

because it did not develop the practical side of his education. My observations have led me to believe that the hard laborious work, after graduation; the work necessary to a mastery of the clinical side of medicine, is better done by those who have not spent such an inordinate amount of time in college.

It would seem to me that a young man or woman who has been graduated from a standardized high school would be sufficiently familiar with the English language intelligently to take up the study of medicine. By making this concession, we would again open the doors to many of the young, healthy, energetic, enthusiastic and industrious young men from the country, who would help to fill the depleted ranks of the profession.

It is only natural that parents who educate their sons in medicine, as the requirements are today, want them to be located in the cities where the best opportunity for advancement is offered. The profession of medicine, if divested of its mercenary features and faithfully followed, is a work in God's vineyard and those wishing to enter it for the good they can do, should be encouraged not handicapped by unwise and selfish legislation.

The physician's chief aim in life should be the cure of the sick and the prevention of disease. His education should be so regulated as to enable him to render the best service to the greatest number, and not be directed toward making a specialist of every graduate, so as to serve the few who need exceptional treatment, and incidentally be the cause of prolonging the course of study.

The remuneration of a physician for medical services rendered is not sufficient to make the study of medicine attractive to a young man when contrasted with the time and money necessary to equip him for the practice of the profession. The prestige, the influence for good in the community, which a physician enjoyed in years gone by, are rapidly dying out; therefore, fewer and fewer men are entering the field.

When all is said and done, the fact still remains that very few of our recent graduates are willing to locate outside of the large cities, and as the older men die or become incapacitated, people will need medical attention and they have a perfect right to demand it of the medical authorities. Would it not be wiser to open our doors, and give a good practical

course, which could be used by all physicians for the cure of the sick, and leaving for post-graduate work many of the things taught in our colleges today which cannot be used by physicians unless near a medical center, where hospital facilities are obtainable?

The standard of medical education must be kept high, but not beyond reach, so that a sufficient number of men may be graduated from well-regulated medical colleges properly to care for the civilian population in *all* sections. Medical legislation must be just to the masses and free from sectarian or sectional advantages.

Men who wish to continue their studies beyond the limit required for the treatment of the usual run of diseases to which the human body is subjected, may do so by taking up post-graduate work fitting themselves for the various specialties in medicine. This, to my mind, would avert what sooner or later will become a serious crisis and *may* become a catastrophe. The subject should have immediate and careful attention on the part of our medical schools and societies.

Whenever I approach this subject of the education of physicians, I am reminded of two little occurrences; one of which is real, and the other probably manufactured, but both will serve as good illustrations:

No. 1—A married lady in Philadelphia, who has to run a boarding house to help make her own living, said lately, when speaking of her husband, "Yes, he is a well-educated man, he was graduated from one of our best colleges, and from two foreign universities; in fact, he has been educated until he is dumb."

No. 2—A beefy man, conscious of newly-acquired riches, tried to enter his son in one of the large colleges. The son wore a top hat, spats, and a monacle. He also carried a cane, the handle of which was generally in his mouth. Father and son were introduced to the president of the college; the father asked: "Professor, how much will it cost to give my son an education?" The president looked at him, and smiled faintly, answering, "God knows! but we can put him through college for perhaps $5,000." That is about the status of some of our hyper-educated men in various arts, trades, and professions, not excluding that of medicine.

Another proposition has been put up to this society by the American Institute of Homœopathy, that of federation of

all the State Societies into one national organization, for the mutual benefit of all homœopathic physicians. "In union there is strength," therefore, what is best for the majority of homœopathic physicians should be actively supported by all the State Societies.

As I have said, Pennsylvania has the largest, most prosperous, and best organized State Homœopathic Society in the country, and naturally has been urged to join this federation. The pioneers in homœopathy in this State were compelled to organize themselves for protection against the dominant school of medicine, and in so doing they built up an organization second to none. Had it not been for the untiring energies of these older physicians, the practice of our special school of medicine would long since have become a matter of history.

The Pennsylvania State Homœopathic Society has handed down from generation to generation, gradually increasing the number of responsibilities, but with them all it has also given us a standard of efficiency that must be maintained at all hazards, otherwise the Society will degenerate, and will fail in the purpose for which it was originally created. If the best interests of the homœopathic profession would be advanced by our joining the federation, it is our duty to become members and to help the weaker societies; but as this is a debatable question, with good arguments on both sides, I feel that our Society should consider well the arguments for and against this union, before taking action. The little money obtained by the assessment of one dollar per member, as originally planned, would not be sufficient to support any extensive propaganda for the good of our school and would, in many instances, retard the work of the various State Societies unless an increase of yearly dues were possible. The officers and members of this Society have nothing but the welfare of the homœopathic profession at heart, and should it be demonstrated that the best interests of the majority can be had by this affiliation, I know that every member will not only *vote* for it, but he will also *work* for it.

The homœopathic physicians of today have done many things of which they may be justly proud and others for which they, as a school, should be criticized. The literature of our school is very limited. Men who have the ability to write text-books on subjects pertaining to their specialties have not

done it, and as a result our colleges are compelled to recommend as standard text-books those written by men of the dominant school of medicine.

We have, in all the specialties, men in our school who could give us a working library second to none. It should be the duty of every teacher to contribute his share of work toward obtaining just such. This society should encourage our men to do more literary work.

Our school to be successful must have text books written by men connected with the school; men who understand the needs of the beginner whether he be in college or in practice; and above all else the writer should fully understand the principles and practice of homœopathy. Many prospective students have been lost to us by this lack of homœopathic literature; the young men stating they would rather go where they could get instruction at first hand; that is, from the authors of the books we are compelled to use because of the need of good homœopathic books.

Today the only homœopathic journal published east of Chicago is THE HAHNEMANNIAN MONTHLY, the official journal of this Society. One by one, the monthly publications were discontinued, showing a lack of financial support by our profession. THE HAHNEMANNIAN MONTHLY today is a journal of which we, as homœopathists, may well be proud, and for its success we may thank Dr. Clarence Bartlett, because of his enthusiastic and tireless efforts as its editor. This journal is to become the property of the State Society and it is the duty of every member not only to contribute his financial support, but also to furnish papers timely for publication, so that the journal may be enlarged and its field of usefulness be increased.

I bespeak for the journal your hearty co-operation. If you are a homœopath resident in the State and are not a member of the State Society, join now and aid the Society, the journal yourself, and homœopathy.

If you live outside the State become a subscriber and help to maintain the only authoritative homœopathic monthly in this section of the country! Read its contents, send us your constructive criticism and you will thus further the useful and vital purposes of homœopathy, and above all else you are sure to profit by the excellent reading that our official organ always

contains. If you *must* be *selfish* turn selfishness to some good account.

I cordially thank you, ladies and gentlemen, for your courteous attention and consideration. Don't fail to prove to us that you are an ardent supporter of the grand old motto, "Similia Similibus Curentur."

PRESIDENT'S ADDRESS.

G. W. MACKENZIE, M.D., PHILADELPHIA.

Delivered before the Philadelphia County Homœopathic Medical Society, September 11, 1919.

From time immemorial it has been the custom with every organization for its newly elected president to deliver an address upon his installation into office. As a rule he opens the address by gratefully acknowledging the trust placed in him by the society in electing him to the office. He then proceeds to restate the object for which the organization was created. He congratulates the society on its past achievements, laying stress on those particular ones that stand out prominently from the others. He concludes with a prophecy of even greater accomplishments for the future, and with this thought in mind recommends the adoption of definite plans of procedure, according to the breadth and depth of his vision. By way of a supplement he promises to administer the office to the best of his ability, abiding by and upholding the constitution in a manner comparable with that of his worthy predecessors.

Adhering more or less to the above outlined formula, I wish first to thank the members of the Homœopathic Medical Society of the County of Philadelphia for the honor they have conferred in electing me to the presidency for the coming year. Those of you who were present at the meeting when my name was proposed as a nominee for the office, may recall the fact that I stated frankly that while holding membership in the Homœopathic Societies, city, state and national, I was at the same time holding membership in old school societies; besides, I had been and am still taking an active part in their meetings, at least, so far as the scientific programs are concerned. In view of these facts I begged the privilege of withdrawing my name, fearing that some one might feel, if not

then, at some other time, that the society had made a mistake in nominating one in my position to so important an office. Nevertheless, you saw fit to allow my name to stand. The meeting following was election night and although I did not absent myself intentionally, I was glad of the excuse to be absent in order to permit any member, inclined to do so, a freer opportunity to raise an objection. When learning later that no objections had been raised, and in view of the proceedings up to this time, I have reason to feel doubly grateful for the trust you have placed in me and pray that my future conduct will in no way cause you to regret the action you have taken.

The real reason for my absence, however, was to fulfill an obligation at Atlantic City, where I was busy pleading the cause of homœopathy in a paper read before the American Medical Editors' Association. I am pleased to report that the cause, if not the paper, was well received and favorably discussed. There was but one feeble protest which was easily answered. Corroborative of the "sign of the times," I wish to report that Dr. Sarah M. Hobson, editor of the Institute Journal, presented at the same meeting a well prepared and able paper on the subject of "Homœopathic Medical Literature," which was likewise well received. In her paper she took occasion to enumerate the various methods of cure, laying special stress upon homœopathy. Thus in a program of ten papers there appeared two on homœopathic subjects, which, it must be granted, is a favorable representation for the school.

This brings to mind a few other facts that I learned this past summer. At a meeting of the American Triological Society in New York City, in conversation with Dr. L. W. Dean, of Iowa City, who is dean of the University of Iowa, I learned that the university there had instituted a chair of homœopathic therapeutics. Upon asking Dr. Dean what the prospects were of the matriculates electing the subject for one of their courses, he replied "very good," and added that from the present indications he believed there would be a great many more students to take up the study of homœopathy through the university than formerly did through the Homœopathic College. A few weeks later I conferred with Dr. George Royal, at the Institute Meeting in Asbury Park, referring to my conversation with Dr. Dean in New York, when Dr. Royal confirmed all that Dr. Dean had said, and at the same time paid Dr. Dean

a most liberal compliment concerning his fair-mindedness toward the subject of homœopathy.

During the conversation referred to between Dr. Dean and myself in New York, Dr. Clifton Miller, of Richmond, Va., who overheard us talking, ventured the remark that he had been quite active during the last few years in advocating a chair of homœopathy in the University of Virginia. Knowing both of these physicians to be sincere, high types of gentlemen, I am convinced that they realize that the time has arrived for the more general recognition of homœopathy. What was done in Iowa this year was also done in California this same year, and was done in Ohio a few years ago, and has been an accomplished fact in Michigan and Minnesota for many years past. The same thing is going to happen elsewhere; eventually it will be as nation-wide as prohibition has become, in spite of the prevailing belief of only a few years ago. Conservative Pennsylvania may be as slow in accepting this innovation as it has proven itself to be in accepting other things of a progressive nature.

Many circumstances of various kinds might be cited to show the tendency of the dominant school to a greater recognition of homœopathy. For instance, the acceptance of homœopaths to membership in old school societies, the acceptance of homœopaths to fellowship in the American College of Surgeons; the recognition of homœopaths in the governmental services; the lack of discrimination on the part of physicians of the two schools to consult with one another, undreamt of twenty years ago. Barriers have so far disappeared that it is not an uncommon occurrence for an old school physician to read a paper before a homœopathic society and vice versa. Many of you can recall that, when the Germantown Club held a symposium on "Syphilis," the old school participants, when they arose to speak, received an even more cordial reception than the members themselves. This may have been due to the high standing of the old school gentlemen who took part, but I am inclined to believe that it was due rather to the compliment the club members felt the old school men were paying to our school by taking part in the program.

All the facts that I have cited are well known to most of you, so that I feel that you can agree with me that if the march of events continues at the same rate and in the same direction for the next ten years as they have in the last ten

years, that homœopathy will be universally recognized as a system of therapeutics by all State universities.

Although we have no right to claim for our society the entire or even major part of the credit for the recognition thus far won, no one can deny the fact that our society has contributed its share to the victory by having kept itself intact, working concertedly, side by side, with other organizations of its kind and in harmony with the National Society for the one great cause which they all represent and in so far as our Society has contributed, it deserves congratulations. As a Society we have stood together and must continue to do so until the victory is complete. Until that time we must hold together as a strong body, strong numerically, scientifically and honorably, keeping a watchful eye on the ultimate goal, that is, the universal recognition of the law of similars as a fixed principle in therapeutics, the attainment of which can be hastened, not by antagonism, nor by soft-soaping, nor by politics, nor by any other unfair means, but by honest efforts and hard work and, too, by not hiding or overrating them. Let results speak for the cause.

It has been suggested that the dominant school would probably long ago have recognized the law of similars if it were not for the name of homœopathy. It is silly nonsense on the part of the members of either school to allow the principle to be sacrificed for the sake of a name.

In the meantime let us hold together as a working unit, doing our level best to prove that we have faith in our cause. Let those of small faith keep out of the way of others of larger faith. Let us be honest with ourselves and report only such successes as will bear the closest scrutiny. Let us keep abreast of the times in all subjects medical, including the ultra scientific. On the other hand, let us not forget that the practice of medicine is a complex subject which cannot effect cures upon scientific lines merely. For instance, when a patient presents himself for treatment, let us say, of syphilis—active or latent—the manifestation of the disease is dependent not alone upon the presence of the spirochaete, which might suffice for the strict scientist, but upon the patient's hereditary tendencies, mode of living, his occupation, his past treatment, his vigor or lack of it, his mental attitude and other equally important factors. All these and many more are considered important by no less an authority than Fournier, and he makes

use of all of them as guides in the selection of treatment in each particular case. This consideration of every factor in a case constitutes the art of healing in contrast with the so-called science of medicine, and it is an outstanding feature in the practice of medicine after the homœopathic plan and should be constantly borne in mind and never lost sight of.

The incoming president usually assumes the privilege of recommending to the Society a certain plan of procedure to be pursued so long at it is in harmony with the object as set forth in the by-laws, looking toward an increase in its power and sphere of usefulness. The object of the Society is clearly stated in Article II of the by-laws, which few of us bother to read, except when called upon to fill an office in the society. So far as it refers to "the advancement of the medical sciences in general and especially the applicability of the homœopathic law in the treatment of the sick and the prevention of disease," we all approve.

The real question that presents itself, however, is, how can these objects be best accomplished? The answer to this question varies with the individual viewpoint. We might go even beyond this question and ask for an interpretation of the clause itself, which, after all, is a very general expression capable of different meanings and limitations. Each individual is left free to interpret the clause for himself, after which he is again free to do in the case as he sees best. The result is plenty of individual activities, but no concerted action. The marvel is that we have accomplished anything. What we need instead, is a General Foch to unify our forces when the ultimate results, namely, the universal acceptance of the laws of similars by the profession at large, as well as the laity will be positive and swift.

I hope the Society will give this matter their earnest consideration, for I feel confident that much can be done especially at this time to advance the interest of homœopathy, not as an asset to any individual, or group of individuals, but for the advancement of knowledge generally and for the benefit of humanity as a whole.

Until some comprehensive plan can be satisfactorily worked out, I desire to urge upon the Society the following recommendations:

First—That we continue to hold fast to the truth as we have seen it repeatedly demonstrated and continue to have faith in its ultimate triumph.

Second—That we make a drive to increase our membership under the supervision of the membership committee, so that before long we may count among our members every graduate from a homœopathic college residing in Philadelphia and its environs. We should not stop there, for every effort should be made to bring into our Society graduates from old school colleges who may have a respect for us and our form of treatment, and who may desire further knowledge of homœopathy. I can see no less reason for an old school graduate belonging to a homœopathic society than for a homœopathic graduate belonging to an old school society.

Third—That we plan to make our meetings, under the direction of the program committee, the most inviting, in order to increase the attendance and interest in the meetings. I believe the committee as appointed is capable of the task and I beg all members to lend the committee assistance whenever it may ask.

In closing I pray that the power may be granted me to conduct the office of president of this Society in a manner comparable to the strength of its cause which in turn is no less comprehensive than humanity itself.

FALLING HAIR, CAUSES, PREVENTION AND TREATMENT WITH ULTRA VIOLET RADIATIONS.

BY

RALPH BERNSTEIN, M.D., PHILADELPHIA, PA.

Professor of Dermatology, Hahnemann Medical College, Philadelphia, Pa.

(Read before the Pennsylvania Homœopathic State Medical Society at Philadelphia, September 16, 1919.)

In presenting the subject of falling hair, my discussion will be limited to the loss of hair which begins at or shortly after puberty and continues until later life, often ending in partial or complete baldness; and the loss of hair following acute febrile diseases, which was so prevalent after the grippe epidemic of last year.

There are two factors of much importance which are responsible for what is commonly known as "falling hair"—first, the improper care of the hair and scalp, and, second, the

presence of two bacilli—the micro-bacilli of seborrhoea and bottle bacilli of Unna.

The scalps of children and adults should not be shampooed oftener than once in six to eight weeks; this depending, however, upon the occupation and environment.

The pernicious habit of daily wetting the hair in order to comb it, is to be absolutely prohibited; not that the wetting is harmful, but that the scalp is never thoroughly dried, and there is, therefore, a constant maceration going on, which, together with the heat of the scalp and the collected detritus, creates an excellent and fertile field for the aforementioned bacteria.

Frequently at fourteen years of age there is a furfuraceous scaly condition of the scalp, which continues for several years. There is constant exfoliation going on, the scales being dry, fine and powdery in character. There is slight itching of the scalp, and the child takes great delight in making the so-called dandruff fly.

There is usually no falling of the hair now, and this condition is known as pityriasis simplex—a simple scaling of the scalp, as it were.

Let us collect some of these very scales and put them beneath the microscope. Numerous flask-shaped bacilli present themselves, the so-called bottle bacilli of Unna, so named in 1892 and described by Malassez as early as 1874.

They vary considerably in shape; usually, however, they appear as a gourd, perhaps at times described as being the shape of a peanut, having a short, narrow neck with clubbed extremities. They are usually arranged in groups, or they may appear singly. They stain with the usual dyes, are not decolorized by Gram's iodine solution, and grow in ordinary media.

There are, as well, to be found numerous micro-bacilli of seborrhoea, which present themselves as myriads of very fine, rod-shaped bacilli which have a slight resemblance to the tubercle bacilli.

Here, then, we have two bacilli which no doubt have much to do with falling hair and the later baldness which is apt to follow.

Let us bear strongly in mind that it behooves us to correct this condition in early youth, with just as much care and

attention as we would remove existing comedoes to prevent acne, if we would spare the bald heads of future generations, especially so if there be a tendency to baldness in the family.

About the sixteenth year the squams which were previously so dry and powdery in character are dry and powdery no longer, and they cease to fall. Instead, they are thick and yellow and greasy, and now it is that the hairs begin to fall. Gradually at first, more profuse later, and usually worse during the summer time.

Here we have a condition known as pityriasis steatoides, a fatty pityriasis, occurring diffusely on the vertex and the temples. The hairs which fall at this time have new ones take their place, only to be lost again.

We now have a chronic inflammatory condition. There is imperfect cornification, especially about the mouths of the follicles; there is more or less vascular dilation, and the hairs before they fall seem to have a peculiar opaque appearance and lose their luster. The mouths of the follicles are widely dilated and there is a slight degree of parenchymatous oedema present about them.

As early as the eighteenth year there is a gradual supplanting of the steatoid pityriasis with a condition of true seborrhoeic dermatitis of the scalp; that is, an increased secretion of sebaceous fat.

Hairs are now rapidly falling, and the younger the subject the quicker is the process which leads to total baldness. If baldness should begin at the eighteenth year, the probabilities are that by the twenty-fifth year there will be a marked condition existing, with a fall of from three to four hundred hairs daily.

If the process should not begin until the twenty-fifth year, then the probabilities are that complete baldness will not follow until about the fiftieth or sixtieth year, with a loss of from fifty to sixty hairs daily.

Finally there is nothing left but a fine, downy growth, which likewise in time gradually disappears, leaving nothing of this once vast army but a bald, shiny top, with perhaps here and there a few odd hairs struggling bravely for existence; and thus we have the final stage.

With reference to the prevention of falling hair, we are all well aware of the close relationship which exists between

bodily health and hair health, so that it is of much importance to regulate carefully the body hygiene.

As to a proper routine for good hair health, let us consider the use of the brush and comb. First, the proper kind of a brush and comb is to be used.

The proper brush has its rows of bristles wide apart, and the individual bristles of each group are longer in the center and shorter about the periphery.

The proper comb likewise has its teeth set wide apart, and the ends are round and not pointed, and there is an absence of rough edges to the teeth.

There should be two brushes—a stiff one and a soft one. The stiff one should be used the first thing in the morning, brushing the scalp thoroughly to increase the circulation, until a decided feeling of warmth is produced, to remove the existing dandruff and foreign matter.

The soft brush is then used to assist the comb in parting the hair. The comb has but one use, and that is to part the hair. It should never be used for the removal of dandruff and scales, and the fine tooth comb only for the removal of nits.

Hats with tight, constricting bands should never be worn because of their interference with the circulation, and it is also of decided advantage and benefit to give the scalp and hair air baths as frequently as permissible with existing conditions of weather and surroundings.

The hat should be worn as little as possible during the summer time, and the hands should be passed through the hair occasionally so as to permit free circulation of air. The soft felt hat or cap should be preferred, and the same should have vent holes for aeration at sides and top.

Falling hair is to be seen especially after scarlet fever, erysipelas and diphtheria, and has as well been noted after attacks of measles, mumps, pneumonia, peritonitis and child birth; and was particularly prevalent after the influenza epidemic of last fall, in fact, cases of loss of hair following the grippe are still being treated.

In the prevention and treatment of falling hair, modern science has given us the ultra violet ray, as emanated from the quartz mercury vapor lamp; the essayist using the air

cooled lamp for this purpose, it being possible to treat the entire scalp with one exposure.

Before beginning treatment the lamp should be allowed to burn for five minutes, in order to reach its maximum of intensity. The patient should be seated directly beneath the lamp, with the burner two feet above the scalp, the first treatment consuming ten minutes.

With each successive treatment the distance of the lamp should be decreased six inches, until a minimum distance of one foot is reached. Each successive treatment should be increased five minutes, until a maximum of thirty to forty minutes has been reached.

It is to be remembered that many of the rays are absorbed in dark haired people, and, therefore, longer exposures are necessary than in those having light hair. Where there is an abundance of hair it should be parted from time to time so that the rays will be enabled to penetrate and reach the scalp.

If the patient is willing, the hair may be cut, for in this way the rays will have full sway; but this procedure is not necessary, as excellent results have been obtained without it.

The eyes should be protected with dark glasses which have side flaps upon them. In the absence of dark glasses, black cloth may be used. Accidental conjunctivitis or even skin burns, which may result, are absolutely harmless and never result in lasting injury.

The inquisitive should be cautioned against looking into the light with naked eyes. Children should never be treated without an attendant.

Ultra violet radiations have more than demonstrated their usefulness in the treatment of falling hair, both of the idiopathic and symptomatic types.

In symptomatic types which have been rapid in their development, particularly after serious illness, and as well in the types of slow evolution, being the result of seborrhoea and other scalp diseases, the results have been prompt and satisfactory.

In the treatment of falling hair due to seborrhoeas in which the bottle bacilli of Unna and the micro-bacilli of seborrhoea are the causal factors, the results here obtained are due to the bactericidal effects of the rays. Dandruff is always a constant factor, and is loaded down with myriads of

the aforementioned bacteria. It is remarkable to see how quickly the dandruff will disappear after exposure to the ultra violet rays.

Ultra violet rays act as a decided irritant to the outer layers of the scalp. The vitality, therefore, of numerous skin cells is decidedly damaged, and in order to take care of this damage there is a dilation of blood vessels with consequent hemorrhage as a means of removing the dead and damaged cells; in other words, resorption takes place, the destroyed epithelium being replaced through increased cell division, and the very superficial layers being entirely exfoliated.

There is no doubt but that at first there is a marked increase in the number of bacteria, due to the increased blood streams, but secondarily there is rapid destruction.

Ultra violet rays have a decided influence upon the cutaneous nerves, the rays being antipruriginous and nerve irritation is at once reduced. There is, as well, a general stimulating effect upon the entire economy.

The rays, therefore, have the ability to produce congestion, remove exudates and cause desquamation of the epidermis of the scalp.

It must also be borne in mind that systematic effects are gained by the use of ultra violet radiations because of the production of ozone, which results in an increase of oxygen in the blood stream.

It must be remembered that ultra violet absorption does not take place in the oxygen alone of the red blood corpuscles, but also in albumin substances.

In strenuous treatments the period of reaction varies from several to twenty-four hours, depending upon the intensity of the radiation; reddening of the scalp setting in. There may be marked oedema with serous exudation producing blebs and even crusts.

In from five days to one week all evidence of the inflammatory reaction usually subsides, and there is never any destructive action. It is only after reaction has taken place that decided effects upon the deeper tissues of the scalp are noted.

Certain it is that the rays must influence the vasomotor system. It is, in turn, responsible for vasodilation and consequent increased blood flow, and naturally therewith the production of new cells and tissue.

And last, but not least, we have the indicated remedy, which acts by its ability to increase the opsonic index—to increase the antibodies (if you please), or the antagonistic serums of this particular type of bacilli (if you care to have it so), and thus makes the soil unfertile for the bacteria at this particular location because of its selective influence.

Among the more important remedies which have been found of value in aiding in the successful treatment of falling hair are: Sulphur, kali carb., kali sulph. kali mur., mezereum, kreosot, phosphorus; the potencies used being either 6x, 12x or 30x.

CHRONIC BRONCHITIS WITH EMPHYSEMA AND ASTHMA.

BY

WM. RENDELL WILLIAMS, M.D., PHILADELPHIA.

Clinical Professor of Physical Diagnosis in the Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of Pennsylvania, Sept. 16, 1919.)

I HAVE chosen the subject of chronic bronchitis with two of its commonly associated complications, in order to briefly and by no means exhaustively discuss various phases of its etiology and diagnosis.

Chronic bronchitis is an everyday diagnosis, and withal a satisfying one to the patient, but as in the case of heart disease, one should not rest satisfied until the underlying cause is completely comprehended. This may require considerable time and trouble, but is most necessary before intelligent therapeutic measures are undertaken.

Let us consider the patient who comes to us with a chronic cough and expectoration. He may be young, middle-aged, or old. A carefully taken history may determine the condition to have arisen subsequent to some infectious disease, such as measles, whooping cough, influenza, or pneumonia. It may be due to local irritants, such as gassing or exposure to irritating dust and fumes.

Usually it is attributed to colds or a repetition of colds with acute bronchitis. Quite likely the patient is troubled only in winter, with a "winter cough," or only in the summer months, as in "hay fever" victims. In any event, we are likely

to have a much-treated, and greatly discouraged or passively resigned patient to deal with.

Our examination must be exhaustive, and not of the chest alone, for we must bear in mind that chronic bronchitis is a purely secondary matter. We must search out the underlying cause responsible for the disturbance of the circulation and nutrition of the bronchial mucous membrane, which has permitted infection and consequent inflammatory changes to persist. Infection and faulty circulation are two factors invariably present; occasionally mechanical irritation also. The success of our treatment depends solely upon our ability to discover and remove the underlying cause.

Examination of the bared chest shows the usual evidence of emphysema. If the chest is not uniformly dilated and mobile to the extent of its limited ability; if there, for instance, is retraction and limited motion at one base, one immediately suspects a long-standing purulent pleurisy, with bronchial fistula. Retraction at one or both apices may signify a fibroid phthisis; abnormal pulsations may mean an aneurism. None of these abnormalities should escape the observing eye.

Inspection is quite as valuable as percussion or auscultation, possibly more so. The usual physical examination should detect the presence of advanced tuberculosis, but not always. It is remarkable what a large percentage of old people, victims of what is commonly called chronic bronchitis, even with asthmatic attacks and without fever or emaciation, will show tubercle bacilli in their sputum when it is repeatedly examined.

Tuberculosis must be ruled out in every case, for an emphysematous chest may hide a great deal of tuberculosis. Bronchiectatic cavities should be sought for, but their presence is more often determined by the amount and character of the sputum, and an X-ray examination, than by the physical examination.

Tumors in the mediastinum pressing on a bronchus or on the trachea, should be eliminated. It is not uncommon to have pressure on one main bronchus as the cause of the bronchitis and asthma,-usually with unilateral signs. In other words, we should exclude an intrathoracic mechanical cause for the bronchitis.

Percussion and ascultation should detect any pulmonary consolidation. There may be the usual rales present, particu-

larly if there has been a recent attack of asthma or bronchial spasm. The chest may be free from adventitious sounds at the time of our examination and show only the usual emphysematous breathing.

Having appraised the status of the lungs, bronchi, and pleura, the condition of the heart, arteries and general circulation should be carefully considered. It is my experience that there is always a circulatory factor in long-standing cases of chronic bronchitis in the middle-aged or old patient, and occasionally in the young.

Let me detail an illustrative case which you will recognize as a type. He comes to the hospital in the fourth or fifth decade, looks old for his years. He is a laborer, possibly a miner, or a stevedore, or a teamster. He has worked hard, been exposed to the weather and indulged in his bit of alcohol. A large-framed, well-muscled, old man. Complexion ruddy, possibly a bit of cyanosis about the lips. Catarrhal nose and throat, bad teeth, immense chest, hard arteries, enlarged heart and dyspnoeic.

He complains of a winter cough which has been present for years. Quantities of sputum raised only after long, racking paroxysms of coughing, particularly bad in the early morning, noisy enough to wake the household. Indeed, to hear such a victim at that time makes one suffer with him, and fear a broken blood vessel, or a strangulated hernia. Indeed, a large percentage of such cases are ruptured. He gives a history of nocturnal urination; is habitually constipated; possibly has persistent asthmatic attacks—a distressing feature.

Examination shows the barrel-shaped chest; the wheezing, sibilant, sonorous rales; the hardened arteries; the enlarged heart, an increased blood pressure, and possibly a trace of albumin shows substandard kidneys.

You have a beautiful example of the vicious circle. The toxic element due to faulty elimination both by the constipated bowels and the substandard kidneys furnishes the autotoxaemia and the filthy mouth foreign products. This accounts for the increased blood pressure, possibly the arteriosclerosis also. The increased blood pressure; the hard work, possibly infection such as syphilis, or a long-forgotten typhoid or rheumatism, and above all, the capillary fibrosis have interfered with the nutrition of the heart muscle. There is a long-standing, but probably mild grade of heart failure which has

permitted a stasis in the pulmonary circulation. This resulting in an abnormal congestion of the bronchial mucosa, permits micro-organisms to thrive thereon and produce at first an acute attack of bronchitis, possibly several such attacks, then a chronic bronchitis. The subsequent coughing produced the emphysema with further embarrassment of the pulmonary circulation and increasing work for the heart, which eventually becomes hypertrophied and incompetent.

This is an every-day picture, exaggerated a bit, possibly, but a good example of the vicious circle. How shall we attack such a problem? The main complaint is the cough, but it is certainly folly to prescribe another cough mixture or waste time finding the remedy indicated by the modalities of the cough alone.

It requires nice judgment to decide where we will break into this vicious circle. Shall we prescribe for the lungs, the heart, the kidneys, the blood pressure, the arterio-sclerosis—or the patient?

As I said before, there is ocasionally a frank circulatory factor in the young person with chronic bronchitis. Cases of mitral disease, particularly stenosis, show a persistent bronchitis. The type is usually a young woman, a brunette in my experience, poorly nourished, has a racking cough, suspected of having tuberculosis, particularly as there may be a history of blood-spitting after undue exertion. Cough worse on exertion, with dyspnoea and precordial pain, and possibly palpitation from the same cause. Look for mitral disease, particularly mitral stenosis.

Another class of cases I would call your attention to are those associated with focal infections, particularly in the upper respiratory tract.

Some years ago I was called to attend a lad with lobar pneumonia. He had had a previous attack under Dr. Goodno's care and was supposed to be tuberculous. He had a chronic bronchitis, adenoids, diseased tonsils (which had been unsuccessfully operated because he nearly died on the table), and also a chronic otitis media. He had subsequently eight other attacks of lobar pneumonia, under my observation in the next four or five years. We could carry him through the attacks, but could not prevent them until we hit upon the scheme of making an autogenous vaccine from his sputum, which showed at all times, a multitude of pneumococci. This

stopped the pneumonia, improved the bronchitis; later the throat and ear were cleared up and the boy is now a vigorous and robust college student.

One could go on multiplying such examples indefinitely. I recently examined a middle-aged woman who had a deforming arthritis, chronic bronchitis, and asthma, and a mouth full of necrotic teeth and a foul pyorrhea. She was a bed-ridden cripple, but clung to her teeth.

Now a word in regard to asthma accompanying and complicating chronic bronchitis. Why it should occur in some cases and not in others can be only explained by the personal equation. Asthma in young people associated with bronchitis, should always suggest hereditary syphilis. Possibly there may be a specific reason for the use of potassium iod. in some cases of asthma. No doubt many cases with the clinical picture of chronic bronchitis and asthma are due to syphilitic strictures of the bronchi, which we can readily understand would be greatly benefited by the iodides.

The treatment of such cases can be summarized in a few words. Much depends upon the energy and personality of the physician if good results are to be obtained.

The social status of the patient must be appraised first, and must be a consideration in outlining treatment.

A complete diagnosis having been made, one proceeds to remove any focal infection that has been detected. Elimination by the bowels and kidneys and skin should be provided for, a suitable diet must be prescribed, one that particularly prevents protein waste products, which over-burden the organs of elimination. The heart must be assisted in its work. An autogenous vaccine made from the sputum has often proved a valuable adjunct in the treatment. Changes in climate may be considered, and lastly the indicated remedy.

Attention to every detail is the only course which spells success.

LETTING GO OF ESSENTIALS.

O. S. HAINES, M.D., PHILADELPHIA, PA.

Professor of Materia Medica, Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of Pennsylvania, Sept. 17, 1919.)

One of the things that we have acquired in a rather long apprenticeship to the profession or art or trade (or whatever it is) of medicine, is a profound regard for the young man. In him reside all the potential possibilities for the future; and, there is no doubt in our mind that the reason his eyes were placed in the front of his head, was that he might look forward rather than backward. And, therefore, if we have anything worth while to say, we shall prefer to say it to the young men present. And that is the difficult part of it—to get the young man's attention.

Some of these days, when the final summing up of the causes of our World's War shall have been completed, there will be some wise fellow who will announce that this old world of ours was brought near to the wrecking point simply because mankind let go of the essentials that make for contentment, safety, prosperity, progress and peace. And we will nod our acquiescence and reply, "True, but we did not realize it at the time."

What we have to say to-day is this: "We members of the homœopathic school of medicine may possibly bring our school presently very close to the wrecking point, if we continue to let go of those essentials which make for our perpetuity, strength, growth and success. And we think that every young man in our school should be much interested in this. He would be were it not true that the average young man welcomes entanglements in their earlier phases, and afterwards tries to escape—when, alas, it is too late!

Now the Law of Similars is exactly the essential to success and perpetuity that we must hang on to. It is exactly such an essential in the use of medicine in serious and complicated cases, that a perfect technique is in the surgical care of serious operative cases. Notwithstanding all of which, we are gradually letting go of this essential, as if it mattered not at all. And the sure enough reason for our doing this is solely that the homœopathic school has not been able to stand suc-

cess. This Law of Similars is the one thing that has lifted us out of the ruck and placed us in the lead. The thing that has made us sure when others were doubtful. The thing that has made our epidemic statistics so wonderful that only the super-educated-in-spots scoff at them. And it will be the thing that will keep our heads visible when the deluge comes. If we let go of it and are submerged, we shall richly deserve the fate.

How much I wish that someone, with the power, might convince us all that our own indifference is a hundred fold more damaging to our cause, than all the obscurantism that ever has or ever will be manifested by our opponents.

Now, gentlemen, there must be no more doubt about this matter. Let us all today agree that we must at once renew our study of the philosophy of homœopathy; that we must again renew our acceptance of the Law of Similars as a valuable aid in medical practice and as a distinct advance in therapeutics. Let us swear a new allegiance to its methods. Let us start a new propaganda among our people, showing them how efficient the homœopathic art can be made. Let us do all this at once, and let us not postpone it all until too late.

The assets of our school, of which the Law of Similars is such an important part, represent a long struggle and much self-sacrifice. They are very precious. They must be cared for. The old guard is fast dying out. Young men, it is up to you! And as you go home from this meeting I wish you to take this thought with you: The future of homœopathy in America will largely be determined by Pennsylvania.

GASTRIC OBSERVATIONS IN PULMONARY TUBERCULOSIS.

BY

H. M. EBERHARD, M.D., PHILADELPHIA.

Clinical Professor of Gastro-Enterology, Hahnemann Medical College of Philadelphia.

(Read before the Pennsylvania State Homœopathic Medical Society, Philadelphia, September 16, 1919.)

So FREQUENTLY do symptoms of a reflex gastric nature dominate a patient that evidence of the primary disease is not recognized for a time. Gastro enterologists are well aware of this, and also of the fact that perhaps only 25 per cent.

of gastric symptoms complained of are due to a prima facie stomach disease. Making up the remaining 75 per cent. are diseases and disturbed function in other organs.

It is generally well recognized that the stomach is like a mirror, reflecting symptoms due to foreign conditions. This fact was especially emphasized to me several years ago while visiting a sanitarium for the tuberculous in Colorado. There, a common statement was to the effect that many doubted the existence of any tubercular disease in their lungs. They reached this conclusion because their gastro intestinal symptoms dominated all others. In many, only a slight cough was present, while no fever, night sweats nor fast heart existed. Since then, I have examined many cases of this type and have learned to place them in that class where the syndrome "Pretubercular Dyspepsia" applies.

This group of symptoms is as follows: Epigastric distress, marked anorexia, gradual but persistent loss of weight, constipation alternating with diarrhoea, belching of gas, so-called "heartburn," etc.

Physical examination of the chest in the very early stages often reveals no distinct physical signs by the usual methods. Latterly, however, we owe much to the X-ray in showing the true pathology of these cases. Why these gastro-intestinal symptoms should stand out so prominently, is hard to explain. It is possible there exists a toxin which acts upon the centers governing the digestive organs.

After the tuberculosis has advanced to the stages of consolidation, cavity formation, etc., one can better understand the unbalanced poise of the gastro-enteron.

In this paper I would like to present some observations as to why many patients with pulmonary tuberculosis have distressing gastric symptoms.

Gastric Atony (Myasthenia gastrica).

Atonic Ectasia (Chronic dilatation of motor insufficiency of the first degree).

These defects are potent factors in producing gastro-intestinal symptoms, either before pulmonary involvement or as a result of it. With the usual loss of weight and lowering of bodily tone, the musculature of the stomach may weaken. As a result atony, or moderate motor insufficiency, develops. With these handicaps, the patient is often told that in order

to get well he must eat abundantly. In order to hyperfeed, the patient is made to drink milk in large amounts, to eat abundantly of eggs and other foods. What occurs can readily be seen. All symptoms recognized as gastric atony and chronic dilatation of the stomach develop. Unless these defects are recognized and specific treatment instituted, the patient's ability to eat will be materially lessened. Continuous eating of eggs, and the drinking of large amounts of milk is trying enough without the added discomfort of epigastric and abdominal distress.

Substantially, then, physicians must attempt to improve the dynamic power of the stomach, while treating the primary disease.

Gastroptosis—This, frequently, is associated with a common skeletal defect known as *habitus enteropticus.* Many clinicians are familiar with the long, narrow, sometimes called "phthisical chest." In "habitus enteropticus," a vertical line drawn from the ensiform appendix to the umbilicus, would be longer than one drawn at right angles to it, from the umbilicus to the mid-axillary line. Usually, the costal angle is very acute, and the space between the costal margins less than normal. In this condition the stomach is usually more vertically suspended, and not firmly held. A floating or loose right kidney often coexists and when found, proves gastroptosis in about 95 per cent. of the cases.

At this point I want to call attention to another complicating factor—one which is by itself the cause of gastroptosis and atony, viz., *Putrefactive Intestinal Toxemia.* All clinicians know the connection between indicanuria and the putrefaction of proteins in the intestines.

Bassler is of the opinion that the absorption of indol produces atony, gastroptosis, etc. I have repeatedly confirmed his views in my own cases. Should this form of toxemia exist without atony, etc., its correction frequently improves the patient's general condition.

I have seen cases where the urine showed indican, with distressing digestive symptoms, no appetite, constipation, etc., improve rapidly by correcting the toxemia.

You may ask what can be done for gastroptosis, habitus enteropticus, intestinal toxemia, etc. Briefly, for the first, correct the putrefaction. Little can be expected in the way of

a permanent cure unless this is done. Diet is of the utmost importance. Frequent light meals, always with an excess of carbo-hydrates and the minimum amount of protein. Digestible fats are to be given in large amounts.

While in bed, these patients should sleep with the footboard elevated at least ten inches. This holds good also in atony and chronic dilatation. By this postural position the stomach and abdominal organs are thrown upward, reducing any drag and favoring a return to the normal. Some critics, not familiar with the most advanced treatment of gastroptosis, atony, etc., suggest that postural treatment is of no use. They declare that as soon as the patient assumes the upright posture the stomach at once drops. Their contentions would be true if in the case of a putrefactive bowel, the causes of putrefaction were not removed, or at least reduced.

It has been my experience that outside of the maternal types of gastroptosis, putrefaction is most often encountered. Even where there is a diastasis of the recti, posture and other means of treating the ptosis are frequently beneficial. A surging sinusoidal current often improves the tone of the abdominal muscles and the intestinal musculature. Extra and intra-gastric faradism should not be forgotten.

Lastly, never permit a patient with ptosis, atony, etc., to get out of bed without proper abdominal support. This should be worn until all tests prove the error corrected or benefited.

For habitus enteropticus, deep breathing exercises are to be recommended; calisthenics to broaden the chest, thus increasing the transverse diameter from the umbilicus to the mid-axillary line.

Gastric Chemistry—My deductions after an analysis of many cases show: In the very early stages of pulmonary tuberculosis, before the advent of distinct physical signs, temperature, etc., that free hydrochloric acid may be normal, or at times a little higher than normal. When the first demonstrable physical signs appear, acid values invariably are reduced. This is especially true when fever develops. As the temperature increases, HCl. diminishes in ratio. Pepsin and rennet in contrast to HCl. are rarely diminished to any appreciable degree; even when the temperature soars to a high point these ferments can usually be found.

My reason for calling attention to these facts is chiefly in connection with the prescribing of milk. This valuable fluid food I believe is almost universally ordered in phthisis. Every physician of experience knows when milk is well tolerated, what a valuable asset it is. Yet, all of us have faced a situation where with the greatest co-operation of the patient, milk had to be withdrawn because of vomiting, diarrhoea, constipation, distention, etc. A little physiological reasoning will show the cause. Rennet coagulates milk and throws down the casein, after which pepsin advances this protein toward the peptone stage. Rennet and pepsin, however, are not secreted as such, but as zymogens, pro-rennet and pro-pepsin. In order to become active they must be acted upon by HCl. which produces the true ferment.

As stated, HCl. is invariably low or absent when the temperature is increased, so the activation of these zymogens may only partially take place, or perhaps not at all. Milk is then passed into the intestines where its digestion is expected. At times the pancreas can care for it; again, it can do so only partially.

Another reason why HCl. is so important in liberating the true ferment rennet, is in its reaction with the calcium salts of milk.

Rennet first coagulates the casein into para-casein; this latter substance then reacts with the calcium salts of milk forming an insoluble para-casein.

Healed tubercular lesions show an abundance of calcium which, by many is thought to be obtained from milk by the reaction described. It might be argued that patients with atrophic gastritis drink milk and often take it with ease. Many do, no doubt, but on the contrary, victims of this condition often cannot take milk in any form. Do not misjudge my statements regarding milk. I advocate it in phthisis and invariably exhaust every means before dispensing with it.

To help the stomach tolerate milk, we must start at the beginning. We are told that the HCl. is formed mainly from the chlorides of the blood, by the parietal cells of the stomach. Therefore, sodium chloride should be impregnated in all foods. I emphasize this to patients and often have seen gratifying results from its use.

Again, to increase the flow of gastric juice, Pawlow's

teachings may be embraced, that the flow of gastric juice is often started by stimulation of the sense of smell and taste. Savory or appetizing foods, he has shown to start the flow; this, he calls psychical secretion.

Reasoning from these deductions, it is important to prepare all foods in a very appetizing manner in order to at least start the flow of juice.

Baylis and Starling have called attention to the presence in foods such as meat broths, beef tea, etc., of secretagogues. These act upon the glandularis and produce gastrin which, in turn, continues the flow begun by the sense of smell, etc. Therefore, a cup of beef tea, broths, etc., at the beginning of a meal, might be of great service.

In all cases where gastric analysis shows a HCl. deficit, the administration of dilute hydrochloric acid is indicated. It is best given in divided doses, for an hour after a meal, three times daily. Its use is supposed to activate the zymogens, thus setting free the real ferments. I am convinced it also improves the motor power of the stomach. Invariably, I prescribe the fluid extract of condurango in conjunction with it. This, I have found to be a good stomachic, reducing any catarrhal tendency.

Pepsin in its various forms is too undependable; many preparations are absolutely inert. Again, as stated, its prescription is contra-indicated because the larger number of cases still have active chief cells, and all that is necessary is to activate the zymogens.

Lately, I have been getting very gratifying results by the judicious use of trans-duodenal lavage. A jutte tube is passed into the stomach and allowed to be pushed into the duodenum. If properly done, this can usually be accomplished anywhere from ten minutes to one-half hour. When in the duodenum, inject a pint, or more, of normal saline. This cleanses any adherent mucous, improves the tone, and above all, supplies sodium chloride for the manufacture of HCl.

In a number of advanced cases, this means alone seemed to greatly improve the appetite. Intercurrently the best remedies I have found are: Strychnia, hydrastis, nux vomica, antimonium crudum, etc.

Stomachics—It is generally accepted that there are no known substances that, by virtue of their chemical action upon

the interior of the stomach, directly influence the acid enzymotic secretion. Bitters, such as colombo, gentian, cinchona, etc., act only reflexly by the sense of taste. One might compare the action to the psychical secretion begun by the taste of spicy or very tasty foods. Bitters have but a fleeting action, and must be supported by more substantial therapy.

In presenting for your consideration the foregoing facts, I give the results of a great deal of labor in a field where more investigation is necessary. Yet, if you will observe the facts outlined, many pulmonary cases with marked digestive symptoms will be benefited.

SYPHILIS OF THE CARDIO-VASCULAR SYSTEM.

BY

G. HARLAN WELLS, M.D., PHILADELPHIA.

Clinical Professor of Medicine in the Hahnemann Medical College of Philadelphia.

(Read before the Section on Clinical Medicine, Homœopathic Medical Society of the State of Pennsylvania, Sept. 16, 1919.)

Until a few years ago looked upon as a clinical curiosity, syphilis of the heart and cardio-vascular system has now come to be recognized as an exceedingly common and frequently fatal malady. As far back as 1875 Welch, of Netley, first described a chronic productive aortitis and asserted its syphilitic origin. Long afterwards Döehle, Heller, and others confirmed the findings of Welsh and since the discovery of the treponema palladum by Schaudin we have been able to actually demonstrate the presence of the specific microorganism in the lesions themselves.

Cardio vascular syphilis embraces a wide field, including degenerative arteriosclerosis, obliterating endarteritis, myocardial degeneration, chronic productive mesaortitis, and mesarteritis. We should also include as the result of the effects of syphilis on the vascular system many cases of chronic nephritis, the type of cerebral endarteritis so frequently resulting in hemiplegia, locomotor ataxia, and general paresis. It would be manifestly impossible to cover this wide field in a single paper so that my remarks shall be confined entirely to syphilis as we find it affecting the heart and aorta. Recent investigations have shown that a very large proportion of

chronic syphilitics develop lesions in the heart and aorta. Ninety per cent. of all persons dying of syphilis show evidences of aortic lesions and in 50 per cent. these lesions are the actual cause of the death. Though the manifestations of syphilis of the cardio-vascular system are usually delayed many years after the time of the primary infection and are very insidious in their onset, they constitute as a group one of the most disabling and painful of all ailments, and are more fatal than all the other lesions of syphilis combined. The following data are based upon a clinical study of one hundred cases of cardio-vascular syphilis that have come under the observation of the author in private and hospital practice.

The average age of onset of cardiac symptoms was 37 years. Seventy per cent. of the cases gave a positive history of chancre. Thirty per cent. denied any knowledge of chancre. Thirty per cent. of the cases with history of chancre denied having had a skin rash or other secondary symptoms. The Wasserman test was positive in 100 per cent. of the cases giving a history of a chancre. The Wassermann test was positive in 75 per cent. of the cases that denied having had the chancre. Five per cent. of the cases that clinically appeared to be the result of syphilitic aortitis failed to give a history of chancre or a positive Wassermann. The shortest period from the appearance of the chancre to the development of cardio-vascular symptoms was four years, and the longest period was twenty-eight years. The average time that elapsed from the appearance of the primary lesion until the case came under observation with cardiac symptoms was fifteen and a half years. The average time from the appearance of the chancre until the development of the cardiac symptoms was as follows: Pain in or about the region of the heart, 70 per cent. Dyspnoea, 25 per cent. Diarrhea and digestive disturbances, 5 per cent. In the larger proportion of cases the date of onset of the cardio-vascular disturbance was announced by the development of pain in or about the heart, dyspnoea, palpitation, and frequently accompanied by a vertigo, and occasionally by a swelling of the feet. The character of the pain varied greatly but in the majority of cases the patient described the pain as being paroxysmal but recurring at frequent intervals. A large proportion of the cases stated that the

pain ran down the left arm, and a few described it as radiating to the shoulder. The pain occurred at some time or other in about 90 per cent. of the cases. Dyspnoea, as above stated, was the initial symptom in 25 per cent. of the cases and appeared sooner or later in 98 per cent. Disturbance of the rate of the heart was recorded in 60 per cent. The rate was at or about normal in 10 per cent. Not recorded, 30 per cent. The average systolic blood pressure was 140, and the average diastolic blood pressure was 90.

Physical Signs—Seventy-five per cent. showed increase in the area of cardiac dullness. No murmurs were audible in 40 per cent. of the cases. Systolic murmur, alone, occurred in 30 per cent., aortic murmur in 25 per cent. Both aortic and systolic murmurs were audible in 5 per cent. It is probable that the percentage of double murmurs would be much greater than this if the cases were kept under observation for any length of time.

We may summarize the results of this investigation as follows: Clinically, the most common symptom of syphilis of the heart and aorta is pain in or about the precordial region. This pain may be of sharp, shooting character, coming on at irregular intervals or may be dull and constant, aggravated by exertion. It is frequently stated that the pain in these cases is the result of sclerosis of the cardial arteries and, while this statement is correct in a large portion of cases, it must be remembered that very severe pain may occur without any cardial sclerosis whatever as the result of degenerative changes in the heart muscle. In other cases, dilatation of the aorta and aneurysm with pressure may give rise to the pain. Dyspnoea is a very constant and frequently a characteristic symptom of syphilitic aortitis and myocarditis. Dyspnoea, associated with this lesion, is characteristically of a frequently recurring character and is aggravated by slight exertion, and accompanied by a sense of deficient lung ventilation and inability to hold the breath at will. Weakness on physical or mental exertion, vertigo, and persistent headaches, especially after mental effort, are other symptoms very commonly present. Physical signs are enlargement of the area of cardiac dullness which is usually present and is frequently very marked. Mitral regurgitation is common. Aortic regurgitation is said and many more by unusual industry succeed in paying their

aortitis and this lesion when present is certainly quite characteristic. Personal observations lead me to believe that this statement, vouched for by Green and others, is incorrect and that syphilitic myocarditis at least is unaccompanied by aortic regurgitation in 75 per cent. of all cases. It is probably true that where a distinct luetic aortitis is present, aortic insufficiency sooner or later develops in 80 per cent. of the cases.

The treatment of syphilis of the heart and aorta in the stage in which the disease is usually recognized is a matter of great difficulty. Those who are accustomed to the prompt response of secondary syphilis to our ordinary remedies will be keenly disappointed at the failure of the cardio-vascular cases to improve under treatment. In the stage in which these cases are usually brought under the observation of the internist, anything approaching a cure is usually hopeless and even a temporary amelioration of symptoms is exceedingly difficult to bring about.

Let me urge upon you the necessity for earlier diagnosis of these cases as repeated experience has shown that during the early stage a great deal can be done to prevent its further inroads and thus the health and life of the individual can be preserved.

Every syphilitic, even those who are "cured," should be carefully examined by a physician as to the condition of the cardio-vascular system at least once every six months, and, upon the least appearance of any objective or subjective symptoms suggestive of cardio-vascular involvement, active treatment should be instituted.

In cases of syphilis of the heart and aorta that are unaccompanied by circulatory failure, I have found the following system of treatment to give the best results:

Day of Treatment—

1 Intravenous injection neosalvarsan, .3 grammes.
3 Intramuscular injection of grey oil containing 1½ grains of metallic mercury.
5 Repeat dose of grey oil.
7 Repeat dose of grey oil.
10 Intravenous injection neosalvarsan .6 grammes.
13 Repeat dose of grey oil.
15 Repeat dose of grey oil.
17 Repeat dose of grey oil.

20 Intravenous injection neosalvarsan .8 or .9 grammes.
23 Repeat dose of grey oil.
25 Repeat dose of grey oil.
27 Repeat dose of grey oil.

This course of treatment may require modification to meet the indications and contra-indications of any particular case, but on the whole it gives excellent results.

After the series of intravenous injections of neosalvarsan and intra-muscular injections of grey oil have been completed, all preparations of arsenic or mercury are discontinued for one month and during this period the patient is given potassium iodide, starting with an initial dose of five drops of the saturated solution and increasing up to twenty-five drops three times a day.

At the end of the month, the patient is put on the red iodide of mercury by mouth, from two to six pills or capsules of the first decimal trituration daily, according to the tolerance of the patient. Ordinarily this should be continued for one or two months, to be followed again by a course of potassium iodide. At the end of three months a Wassermann test should be made and if positive a repetition of the intravenous injections of neosalvarsan should be seriously considered. If the Wassermann test is negative it is wise to continue mercury and potassium iodide by mouth for six months, at which time treatment may be discontinued if the symptoms have cleared up and the Wassermann test is still negative. Thereafter, the patient should be given a month of treatment by mercury and potassium iodide every six months for several years and preferably for the rest of his life.

Where circulatory failure is marked when the patient first comes under observation, as evidenced by dyspnoea, cyanosis, edema of the legs, etc., the patient must be first treated as any ordinary case of ruptured compensation of the heart, that is, he should be put to bed, given a dry diet, and the usual cardiac remedies, such as digitalis, strophanthus, cactus, arsenicum, etc. If auricular fibrillation co-exists, brilliant results can usually be obtained by the following mixture:

℞

Pulv. Fol. Digitalis gr. XX.
Mass. Hydrarg., gr. XX.
M. F. in Caps., No. XX.
Sig: One capsule three to six times daily.

After the symptoms of decompensation have been gotten well under control the treatment of the syphilitic process should be conducted along the lines previously outlined, care being exercised that the doses of neosalvarsan should not be too large until its effects are carefully observed.

A NOTE OF THE USE OF OXYGEN INJECTED INTO THE PERITONEAL CAVITY AS AN AID IN THE ROENTGEN DIAGNOSIS OF PATHOLOGICAL CONDITIONS OF THE SOLID ORGANS OF THE ABDOMEN.

BY

J. W. FRANK, M.D.

Professor of Roentgenology, Hahnemann Medical College and Hospital, Philadelphia, and Roentgenologist to Children's and St. Luke's Homœopathic Hospitals, Philadelphia.

THE use of gas is by no means new; for instance, the bladder has been distended with gas to study its walls or contents; it was also injected into the kidneys to study the pelvis and into the pleural cavity to study conditions here.

Its use in the peritoneal cavity has been limited, although by no means recent. As far back as 1902 Kelling used it in the examination of two cases; one of ascites and another carcinoma of the stomach. Eight years later, in 1910 and 1911, Jacobaeus of Stockholm, made experiments on the cadaver to determine the safety of the abdominal puncture, and in over twenty cases the peritoneal cavity was reached and no damage done to the viscera; he followed this by injecting seventeen cases of ascites. Three of the cases were remarkable diagnoses, one a metastatic nodule of the liver, gastric cancer and general carcinosis of the intestines. In 1912 Weber and von Bergman observing the advantage of distending the bladder showing a large prostatic gland, conceived the idea that if gas was injected into the peritoneal cavity how much more clear and distinct the abdominal organs would become. About the same time work was done along this line by Lorey. In 1914 Rautenberg introduced air into the abdominal cavity in disease of the liver and spleen and was able to recognize malignancy of both organs. About the same time Meyer-Betz made a similar report. W. E. Danby, of Baltimore, has been doing some re-

markable work by injecting the cerebral ventricles which has been of material aid in clearing up the diagnosis of certain head lesions.

Others of us who have been doing Roentgenographic work for the past ten or twelve years have often been struck by the marked clarity of certain areas on the plates due to the fact that gas was in some part of the hollow viscera. This was especially noticeable in the pelvic region. At times the rectum, filled with gas, would show a markedly clear coccyx or a sacroiliac synchondrosis; at other times about the region of the gall-bladder or the right kidney gas accumulated in the hepatic flexure of the colon or the stomach distended with gas revealing the left kidney clearly. Due to this observation I have been practising, for the last six or eight years, inflation of the urinary bladder for the study of the prostatic gland and bladder wall as well as the coccyx and sacrum. Dr. William H. Steward, of New York, brought the subject of intraperitoneal injection of oxygen before the attention of the Roentgenologists at Atlantic City in January, 1919, and in a further report before the Philadelphia Roentgen Society in June, 1919, he emphasized his former report, showing some very remarkable slides.

Following his report, in conjunction with Drs. G. A. Van Lennep and H. P. Leopold, I have conducted experiments along this line at Hahnemann Hospital and had hoped to have material in such shape that I could present it before the Homœopathic Medical Society of the State of Pennsylvania at their meeting in Philadelphia, September 16th, but on account of the large amount of routine work we were unable to devote as much time to research as was necessary to complete our studies. Suffice it to say the results obtained have been very remarkable and have justified any claims advanced by Dr. Steward.

This method is to be in no sense construed to replace the opaque meal which examination particularly has to do with the hollow organs, whereas the injection of gas into the peritoneal cavity deals more particularly with the solid organs. It is our aim to have our experiments so well advanced to give a more complete and concise report on the advantages of this method within the next few months.

EDITORIAL

PROBLEMS IN MEDICAL EDUCATION: III, THE PRE-MEDICAL EDUCATION.

One of the great problems of the day is the maintenance of a supply of physicians adequate to the demands of the community. Twenty years ago the cry was, "too many doctors." There are still those who believe that we have too many physicians, but the remarkable conditions that have prevailed within the last two years, have apparently proven the reverse to be the case. It is not the province of these remarks to discuss any of the phases of this question excepting in so far as they have a bearing on the pre-medical education. We believe firmly that the present standards are absolutely right, and we would not have them lowered one iota. The claims made by some that they are not necessary is not borne out by the facts, because the requirements are absolutely essential to the proper understanding of the many branches of knowledge entering into the practice of medicine in the twentieth century. More than this, the physician should always be a man of education.

We find fault with the requirements, not because they impose a good education upon prospective medical students, but because they are so arranged that a young man can scarcely expect to enter upon actual practice under the age of 23 years, while the average age on entrance to professional work is somewhere around 27 years. This we regard as altogether too late a period for a young man to *begin* to earn a livelihood.

Something must, therefore, be done to remedy this particular evil, for but few are so situated financially that they can depend upon well-to-do parents to maintain them for so many years. Moreover, it is not a good thing for a young man to be dependent during the brightest years of his life. That a few succeed even now in graduating at the age of 21 years, and many more by unusual industry succeed in paying their

way through medical college, does not invalidate the force of our remarks in the least. These facts only prove what exceptional young men can do. We know that others, while admiring their industry, are appalled at the magnitude of their work, and while anxious to study medicine, refrain from doing so because of the obstacles. It is not that the would-be medical students are lazy that keeps them back; it is the years required before the time for earning a living has arrived.

This, then, is our problem: While maintaining the present high standards of education in medical students, to so arrange the curriculum as to enable them to reach the graduating period at a lower age limit than now seems possible.

We believe that the problem is one capable of solution. A distinct step towards it was the establishment of the science departments in medical colleges. This gave the students a distinct advantage over those who had had the two years' preliminary collegiate course in universities in that the medical college educated them along the lines most needed by medical practitioners.

Another step will be secured when the collegiate courses of the country are standardized or systematized. As things are at present, they are conducted in most extravagant fashion in every respect excepting the salaries of the professors, most of whom are forced to work for a smaller stipend than that coming to locomotive engineers and railroad brakemen. With such a state of affairs in existence, it is easy to see what will ultimately come of higher education. Even a rich university like Harvard is short of funds. It is selling an education for less than cost, so it is said. Before many years there will not only be a serious dearth of doctors but also a scarcity of university teachers to educate young men for medicine. The problem may be met by increased production, which means forcing the curriculum, assigning a greater number of hours for real work and lengthening the college years. The business world stands in horror at labor's demand for a 40-hour week, but where is the literary college that assigns that task to its students? These self-same young men are given about eight months of training which might readily be increased to ten months, which is about what the poor children in the public schools have of school life. Let this be done; let the students in the universities work as hard as do the medical students, and force them to the same hours, and we are sure that the average

high standard college can put its students through the curriculum without any sacrifice whatever in three years certainly, and perhaps within two years. Do this and we give the cream of the youth of the country two years of productiveness at a period of their lives when character is formed and stabilized. Intensive training, moreover, tends to build up high moral ideas. Educators but too readily forget the old adage that "Satan finds some mischief still for idle hands to do."

Unfortunately, the above suggestions are altogether too radical to find ready acceptance. They will jar very seriously the large body of young men who go to colleges for a good time or for social prestige. They will find ready acceptance among those who are after an education.

As to the pay of college professors, we are reminded of a friend who remarked that his chauffeur was well brought up and belonged to a good family, the members of which were all college professors. And then our friend added significantly, "Fred earns more money than any of them."

An added difficulty is found in that the pre-medical requirements are regulated largely by laws, which vary greatly in the States. Nothing short of a revolution can harmonize them to new standards. So far we have standards specified in hours, months or years; but seldom is there a standard based upon the knowledge of the student or of his ability to apply that which he has acquired. We believe that if some practical and reasonable men will but get together, it can be arranged within a year or two that the pre-medical training can be taken within a single calendar year and produce as good men as does the present system.

After all it is the man who counts. A celebrated Philadelphia surgeon still actively at work has remarked that the best men come from the ploughs. Educated man though he is, he recognizes the dependency created in young men by long years of unproductiveness.

We are reminded of the career of one of Philadelphia's most successful physicians, long since deceased. He was an Irish boy, and secured a job as driver for one of our doctors. He became interested in books, and took to reading while waiting for the doctor on his rounds. As time wore on, he became ambitious to study medicine. The doctor helped him along. That particular man developed not only into a well-known and successful physician, but also became an authority in general literature.

CHILD WELFARE PROPAGANDA.

Never has there been a time when child welfare work was more needed than at present. One of the most serious consequences of the war is a shortage of man-power, and it has been shown that this will be more keenly felt twenty years hence than at the present time. Economists call for "more babies," "increase in birth-rate," to meet the situation. It is wisest, however, to direct our best efforts toward the conservation of those babies and children which we have at the present time and which will come along in the future at a normal rate. Of what advantage is a birth-rate of say one hundred babies a year to a community if twenty-five of these babies die during the first year? And that is precisely what occurs in most large cities. It is the community which loses the fewest babies which deserves the greatest credit.

Mother's clinics are now established in almost every community usually in conjunction with maternity and children's hospitals and are doing excellent work in educating the mothers in the proper care and feeding of babies and in overcoming injurious practices and prejudices which have formerly been responsible for many infantile deaths. The social service worker and the visiting nurse have done much in helping the poor and the ignorant in their plight.

Of recent years this sort of child welfare work has been extended in its scope and classes for undernourished children have been established in some cities for the purpose of combating malnutrition in school children, and thus improving the race both physically and mentally. Dr. Chas. Hendee Smith, of New York City, has found that 10 per cent. of all school children in New York City are undernourished. In some schools malnutrition is found in 30 per cent. of the children. The causes are organic and hygienic.

Among the organic causes diseased tonsils, nasal obstruction, carious teeth and intestinal toxemia play the most important role. Hygienic causes include uncleanliness, poverty, insufficient fresh air, sleep and exercise and insufficient and improper food.

Dietetic causes, however, are not always the result of poverty. Ignorance of food values and the improper selection and preparation of the food for the family is often encountered where the weekly income is sufficient to feed them

properly. A diet that is not properly balanced, lacking in vitamins and not readily digested will starve a child just the same as an insufficient diet.

The result of educating the poorer classes in the important question of food values, intelligent buying and proper cooking have done much to improve the health of their children. This work is still in its infancy and merits our hearty support and co-operation. At the meeting of the Homœopathic Medical Society of the State of Pennsylvania recently held in Philadelphia, the subject of child hygiene was ably presented before the Bureau of Pediatrics by Dr. Dorothy Child, Chief of the Division of Child Hygiene of Pennsylvania and the problem of the Under-Nourished Child of Pre-School Age was discussed by Dr. Julius Levy, Chief of the Division of Child Hygiene of New Jersey. The chairman of the bureau, Dr. Margaret Hassler, of Reading, Pa., is to be congratulated upon the excellent program presented to the society by the Pediatric Bureau and for the successful manner in which the program was carried out. C. S. R.

PUBLICITY AND THE NEWSPAPERS.

For several years past we have heard considerable at the various medical meetings concerning publicity of the proceedings in the daily press. Unpleasant comparisons have been drawn between the reports given serious and valuable discussions of real value to the public with those of meetings of various badly co-ordinated medical bodies the sole aim of which would seem to be "Notoriety." To the uninitiated the situation is a mystery; to those who know the newspaper man, the explanation is easy. The real newspaper man is after copy that will make a good story. Whether it is valuable or not is a matter for secondary consideration. If the writer of an essay does not rise to the situation sufficiently to give "good stuff," he receives little or no notice, however valuable to medical science and humanity his contribution may be.

Men high in medical ranks have complained, and have felt that we should start a publicity campaign corresponding in energy with that conducted by many of the queer medical cults. Such men, though honest in their views, do not realize that the newspaper man is after something that is sure to be read.

Within the year, we have read of startling interviews in which grippe or influenza was attributed to the war bread. This wonderful discovery required well on to a column for its complete elucidation.

The following week a chemist of renown had his little joke over the wonders of modern chemical science, injecting the joke into some side remarks when reading a paper before a medical association. He told his hearers that chemists had constructed a substance which corresponded in composition with that of the chicken's egg, and prophesied a synthetic chicken. The newspapers gave the paper abundant notice, much to the author's displeasure.

Still later, there appeared an account of a case of bichloride poisoning admitted to one of our hospitals. The reporter did not see a single physician in connection with the case, and yet in successive issues of his paper, he gave glowing accounts of the discovery of a serum which was an infallible cure for bichloride poisoning. Then when the patient died, the reporter explained that the girl had an expert knowledge of chemistry, and that she had combined the bichloride with some other subtle poison, the combination of which could not be broken up even by the wonderful serum which the said doctors had discovered.

That's Publicity.

There has been much criticism in the profession concerning these various newspaper vaporings, mainly, we believe because most of them suggest most strongly that certain individuals advertised therein are the main beneficiaries of the notoriety. We talk to experts on the subject, and it is explained to us that the fault rests with ourselves in not furnishing proper copy for the papers. Some publicity chairmen have talked of spending money to secure proper space, and we are told that this is not the thing; we must give out the stuff. Money will not purchase publicity. It is the "goods to be delivered."

Now there are two kinds of "stuff." One is made according to the notion of the newspaper man; another according to our ideas; and the two do not agree at all. The former pulls the medical man down to the level of the public; the latter feels that the public should be educated up to his standards. One favors the prominence of individuals; the other the promulgation of principles.

Just how far involuntary medical misinformation is car-

ried on in the newspapers may be demonstrated by the space given certain associations which meet somewhere in America. There was one society which received more prominence than that given either American Institute of Homœopathy or the American Medical Association.

If newspapers are after medical material to educate the public it is readily obtained. Their course thus far does not increase one's confidence as to their sincerity in this respect. Some day some editor will rise to the situation, and will publish really valuable material.

As we write there appears in one of our great dailies a wonderful account of acquired cardiac displacement due, so far as we can judge from the context, to fibroid phthisis. The writer gives the reader to understand that the case is "one in a million." The medical men who read that article are likely to smile.

It is a serious question indeed as to whether in publicity matters the physician is to descend to the level of the public or whether the press will rise to the situation and give real education in medical matters.

THE STATE SOCIETY MEETING.

The recent meeting of the Homœopathic Medical Society of Pennsylvania can well be said to have been eminently successful. The attendance was somewhat disappointing but what was lacking in numbers was made up fully by the interest and activity of those who attended. As is practically always the case in large cities, the attendance of local physicians was small.

The program was a long one but moved smoothly and according to schedule. Of the quality of the papers our readers will have the opportunity to judge for themselves as they appear from time to time in The Hahnemannian Monthly. There was general disappointment expressed, however, at the absence of discussion. This can be obviated in the future if those in charge will but take the precaution to have appointed debators for opening the discussion. Unless listed, the natural modesty of physicians prevents them from placing themselves too much in evidence. Therefore they remain quiet, notwithstanding the fact that many of them have something real to say.

The President's address, which appears in the present number, dealt with very practical topics of which it is difficult to say which one is of the greatest importance. The Committee of the Address was likewise alive to the issues raised by Dr. Weaver and backed the logical attitude of the chair.

The Membership Committee presented a highly satisfactory report, 119 new members being elected.

The program for the entertainment of visiting physicians and their ladies was well filled, beginning on Monday evening. Visitors attended the meeting of the Germantown Medical Club and listened to a most valuable lecture illustrated by lantern slides on the X-Ray diagnosis of diseases of the chest by Dr. W. C. Barker. Monday morning visiting ladies were entertained by the local committee. In the afternoon they were taken on an automobile trip to Valley Forge and in the evening they attended a theatre party. Wednesday they were entertained at lunch and a reception on the estate of Mr. Walter E. Hering, at Abington, twelve miles outside of Philadelphia, in the York Road district. Following the meeting Tuesday evening over 100 members were entertained at a smoker at the Hotel Adelphia. Wednesday evening the annual dinner of the Society was held at the Hotel Adelphia. This was generally pronounced by those who attended the most enjoyable social medical gathering we have had in Philadelphia for very many years. Dr. Speakman acted as toastmaster and was at his best.

Special mention should be made of the work of Dr. Hunsicker in arranging the details of the various entertainments and of Dr. Golden who, despite many obstacles, managed efficiently the very important matter of arranging affairs for the exhibitors.

At the last business session an incident occurred that is illustrative of the legislative capacity of the medical profession. A resolution declaring the inadequacy of the hotel accommodations of Philadelphia and the need for new hostelries was introduced. The absurd statement was made that two members had been obliged to sleep in the corridors of the Chamber of Commerce Building. The statement was an absolute distortion of facts or the parties in question were too canny to pay for beds. Certainly neither of them ever approached the chairman of the Entertainment Committee for he had accommodations to spare. The resolution, it was explained, had been actuated by the Chamber of Commerce. The medical

profession is always good-natured, and in this instance it was true to tradition. The meeting passed it without the slightest knowledge as to the identity of the men who slept on the floor, or without any acquaintance with Philadelphia's hotel accommodations. Numerous other conventions had been held in Philadelphia during the preceding part of the month, and so far as we are aware, none of them fell into the trap of condemning the hospitality accommodations of their host.

THE ORPHAN'S COURT AND THE PHYSICIAN'S BILLS.

Many a physician feels that he has been treated unjustly in the adjudication of his accounts against estates. Considerable of the difficulty is his own fault, because he does not protect himself by keeping his accounts strictly according to law. At the annual dinner of the Homœopathic Medical Society of Pennsylvania, Dr. Mary D. Ridgeway made a plea for a Chair of Economics in medical colleges. Were such a chair established, it would relieve many unpleasant situations.

The general principle governing the presentation of physicians' and, indeed, other bills against estates, is that death has sealed the lips of one of the parties to the controversy. Accordingly the law seals the lips of the surviving party to the case, and insists that the books of the latter shall tell the entire story of the transactions without additional explanation. Because of this judges have ruled that books of original entry which require a key for their complete interpretation are inadmissible. An office consultation recorded as an "O," or a visit as a "v" or a plain stroke, an obstetric attendance as "obs.", etc., is inadmissible as evidence of the services rendered. The original entry must present the following evidence in such a way that any one not versed in hieroglyphics can understand. Thus it is that the record must state the name of the party to whom the account is to be charged; the name of the party to whom the services were rendered; the character of the services, and the amount charged. If this is done with every item, the physician's accounts become unassailable. So far as the ledger is concerned, there is never any difficulty excepting in those cases in which ingeniously combined ledger and day books are utilized. Many of these are not admissible in court.

Now for some examples arising from neglect to pay attention to proper details. Dr. A practiced an office surgical specialty. He saw patients only by appointment. His book of original entry was his appointment book. It was his custom to enter his engagements in the book. Following the patient's departure from the office, the doctor entered on the book, the service rendered, but never entered an amount or charge. His office assistant posted from the appointment book, knowing full well the charge made for the services registered. The judge, after inspecting the book, ruled that the estate owed the doctor nothing as no charge was recorded. The bill was, therefore, disallowed. Conversing on this case with another judge of the court some years afterwards, the latter remarked that the fault rested not with the law nor the ruling judge, but with the attorney and the plaintiff in the case. The engagement book proved that the service had been rendered. It was then up to the plaintiffs in the case to present evidence showing the value of the service rendered.

Dr. B kept a combined day book and ledger, visits being recorded as strokes, office consultations as "o's," etc. All of this was explained in the front of the book. The bill was disallowed because the book of original entry did not tell the story of the transaction.

Some years ago, Dr. C had a claim against an estate, the decedent being a wealthy woman of uncertain mind, though not generally accepted as insane. Her accounts with the tradesmen were passed upon favorably to the latter by the court. A large share of the medical services were rendered to her minor children. Her husband was living but was penniless. The attorney for the estate objected to the physician's bills because the father was living, and, therefore, the estate of the mother could not be held liable. The judge in the case very promptly made the request of the attorney to come to some compromise with the doctors and relieve him of the disagreeable necessity of deciding the case according to the strict interpretation of the law. This was done, though mainly because of the fact that one of the doctors used a cipher day book. The deceased was erratic and had repeatedly told the doctors not to talk with her husband as she paid the bills of the family. This evidence was not presented, otherwise the decision of the

court would have been with the physicians.

A number of years ago, an unusual case was taken before one of the Western Supreme Courts. The bill was for many thousand dollars, if we remember rightly, $40,000. The doctor and the decedent were life long friends. The latter had an income sufficiently large to satisfy her needs. While she was abundantly able to pay for the services rendered, to have done so would have required her to deprive herself of other comforts. The physician, being a personal friend, entered into an agreement with her to the effect that the account should be kept running, and that the entire amount should be paid by her estate on her death. The bill represented services for something like twenty years. The doctor looked upon the account as a savings fund for himself and family. The facts as above detailed were not contested, nor was the account regarded as exorbitant, but payment of the bill was resisted. The judge threw the account out because such a contract was contrary to public welfare. All the evidence seemed to prove that the physician had done all that medical skill could do for the patient's welfare and to prolong her life. Nevertheless it was not proper to make a bill conditional upon the death of a patient.

Court rulings vary in the different States. We have been told that such a contract, if the facts are as undisputed, would stand in Pennsylvania.

All of the above goes to prove that physicians should observe the greatest attention to details in their original entries. More and more estates are being liquidated by trust companies, and every one knows how these corporations hew to the line of the law in their proceedings. In many instances, their adherence to the letter and not to the spirit of the law works an injustice against an estate. Here is a case in point. A certain physician died and a certain trust company became his executor. The physician had had associated with him for years an assistant. The latter made an offer of one thousand dollars for the good will and practice. The trust company officials decided that the practice must be sold at auction to the highest bidder. The assistant bought in the practice for thirty dollars.

DOGS, HOGS, BABIES. BEES AND MENTAL ASTIGMATISM.

MEDICAL DOCTOR—Doctor, I note that you have charged me three dollars per visit for attendance on my dog; my patients pay me but two dollars per visit. Is this not strange?

VETERINARIAN—Not at all, doctor; do you not appreciate the fact that a dog is property while you care only for human lives?

MEDICAL DOCTOR—Ah, yes; I see.

Apropos of current views as to the relative values of human life and common property, we may call attention to the fact that the Kansas Legislature at its recent session appropriated $25,000 for the care of hogs; $8,000 for the care of bees; and $7,000 for the care of babies.

And once more we have heard of a man who one month purchased a prize dog for five hundred dollars. The following month he raised——a fuss over a bill of forty dollars for medical attendance upon his sick wife.

To quiet any misapprehension among our readers as to the reliability of the information above presented, we do solemnly and sincerely declare and affirm that the facts as stated are true to the best of our knowledge and belief; and so we do affirm.

MORAL:—Some people have distorted views as to the fitness of things.

TO OUR PATRONS.

First, we owe an apology for the tardiness with which our September and October numbers have appeared. September was late because of the three days' holiday incidental to Labor Day and the absence of editors from the city. The three days' session of the Pennsylvania State Society accounts for the delay of this number. Hereafter we shall be on time as before.

We have a favor to ask of our readers. If they like and appreciate our editorial efforts, we would ask them to spread the news and make an effort to add to our subscription list. Let each Pennsylvanian do his best to secure a new member. Notwithstanding the large membership of our State Society, there still remains room for improvement. As to subscribers

everywhere, we shall ask them to speak a good word for us. The Editorial Committee of THE HAHNEMANNIAN is interested in its work, and is anxious for more than ordinary success. THE HAHNEMANNIAN is all that is left of that fine string of journals published from Boston to Baltimore, and needs the assistance of all. The expenses of publication are now greater than ever before in the history of the country, and are likely to remain so for a long time to come. Nevertheless, there is a bright side. We are succeeding, and have added many new friends; but we want more. As customary with medical journals, new subscribers for 1920 will receive the balance of 1919 free. Help us to boom our subscription list and the advertising will take care of itself.

DERMAL MYIASIS.—Isadore Dyer reports an interesting case of dermal myiasis. It occurred in an old gentleman who had been bed-ridden for years with asthma, rheumatism and leg ulcers. The leg ulcers presented several necrotic areas in which worms were present, and a number of maggots were actually recovered from the tissues. Dr. King, of the Bureau of Entomology, identified the flies as Lucilia caesar, L. pilatei and L. sericata. The blue and green bottle flies of the genus lucilia are of common occurrence in the United States, but their life is usually lived out of doors and they only enter houses when weather conditions are unfavorable to them. The larvæ are found in most cases on fresh and decayed meats and carrion, as well as in decomposing vegetables and in excrement, and have habits practically the same as those of the common blow flies Calliphora. The species L. sericata and L. caesar are widely distributed throughout the world, and in England and parts of Europe are known as "sheep maggot flies."—*New Orleans Med. and Surg. Journal.*

HERPES ZOSTER AND CHICKEN POX.—Goldberg and Francis report having seen at the Cook County Hospital patients who had herpes zoster and chicken pox simultaneously. In 1900 Head described a boy patient who developed herpes zoster on the fifth dorsal region which was followed in 24 hours by a typical chicken pox eruption. In 1905 Corlet reported four such cases occurring in adults 40, 44, 48 and 70 years of age. In a period of time from 1891 to 1909 Bokay observed nine different cases of herpes zoster occurring in various locations which, after incubation periods of intervals varying from eight to twenty days, resulted in the production of fifteen cases of chicken pox in their respective families as a total. A profuse herpes zoster of lower dorsal and upper lumbar distribution developing in a convalescent scarlet fever patient is reported by Richardson. The patient was not isolated but was treated in the main ward of the hospital. Two weeks after this patient's entrance three cases of chicken pox developed in the ward, and all three of the patients so affected had been in the hospital longer than three weeks. Upon the isolation of this patient no further cases of cross infection developed.—*Jour. Amer. Med. Asso.*

GLEANINGS

MEDICINE

Conducted by Clarence Bartlett, M. D.

Experiments on Droplet Infection of Guinea Pigs.—J. B. Rogers of the Cincinnati Tuberculosis Sanatorium has studied the effects of subjecting guinea pigs to atmospheres of sprays made up of emulsions of tuberculous sputum. He considers that similar work heretofore reported has been open to criticism inasmuch as the mouth of the sprayed animal was not adequately protected and the microorganism might have been swallowed and passed through the mucous membrane into the lymph current. His own technique was to completely wrap the guinea pigs in thick cloth, leaving only the nasal passages exposed. They were then placed in a wooden box that was covered with towels. Through a small opening in the box the nozzle of an atomizer was introduced and by means of this an emulsion of tuberculous sputum, diluted 1 to 100, was sprayed into the box. Exposures continued for five minutes and were repeated at about seven day intervals over a period of from six to nine weeks. After every exposure the mouths and noses of the animals were swabbed with alcohol and the pigs were given a complete bath in 1 to 5,000 bichloride of mercury.

All animals developed pulmonary tuberculosis. But in 60 per cent. there was also gross tuberculosis of the cervical lymph nodes. Other viscera were involved but less uniformly. The fact cannot be overlooked that infection might have entered through the nasal mucous membrane; and the author considers further experiments necessary to determine this question.—*American Review of Tuberculosis*, June, 1919.

Syphilis of the Lungs.—M. Ford Morris, Jr. says: The chief pulmonary lesions in acquired syphilis are, (1) gummata, (2) bronchopneumonia, (3) fibroid induration or chronic interstitial pneumonia, and (4) a progressive destructive disease—the so-called "syphilitic phthisis." The symptoms of syphilis of the lungs are not characteristic or distinctive. Coughing is probably the most common symptom—which results from irritation of the respiratory tubes or from changes within the lungs. The coughing usually produces offensive, yellowish or greenish colored sputum. Hemoptysis also is a common symptom. Sometimes the blood is just sufficient in amount to tinge the sputum, but at other times it is more profuse. Loss of weight and strength occurs in practically all the cases. Night sweats are not infrequent. Dyspnea occurs in some of the cases. Fever is present in many of the cases; often this pyrexia is of the tubercular type. The physical signs, like the symptoms, are neither characteristic nor distinctive. The physical findings are, of course, dependent upon the character of the lung lesion. The diagnosis of pulmonary syphilis is made by exclusion. Tuberculosis must be ruled out. In order to rule out tuberculosis as the cause of such symptoms as were mentioned, one must resort to every valuable test—especially the straining of sputum which has been digested by sodium hypochlorite, the inoculation of guinea pigs, the complement fixation test for tuberculosis. One should not give

potassium iodide as a therapeutic test until all other tests have given negative results. Patients who have syphilis of the lungs may have a syphilitic history; they usually have evidences of syphilis elsewhere than in the lungs; and they practically always have a strongly positive Wassermann.—*Medical Record*, Vol. XCV, p. 722.

Studies on a Form of Pulmonary Syphilis Not Hitherto Recognized.—Leredde has studied 20 cases of acute bronchitis with pulmonary congestion, some of which present emphysema and asthma. The patients were all syphilitic, the disease being apparently congenital. The author summarizes as follows: Congenital syphilis may give rise to a syndrome characterized by dyspnea on exertion, recurrent bronchitis, emphysema and at times asthma. A positive seroreaction was present in some of the patients while others showed stigmata which were doubtless of syphilitic origin. The process in the lungs is probably one of sclerosis of an active character. It also serves as a predisposition for other pneumopathies, such as infectious bronchitis, pneumonia and pulmonary tuberculosis, especially the latter.

When confronted with this situation one should seek to prove or exclude the presence of syphilis in all recognized ways, not forgetting an examination of the cerebrospinal fluid. In the clinically tuberculous this point should be made. Likewise in attacks of recurrent bronchitis, in emphysema and other affections of the chest with exertion dyspnea in which the rationale is obscure.

The presence, as a factor, of syphilis is of more than academic interest, for systemic and persistent treatment with the most active and specific medication may give rise to results not anticipated from the clinical picture. —*The American Journal of Syphilis*, July, 1919.

Syphilis of the Stomach—M. Ford Morris presents the following types: (1) Gastric ulcer of syphilitic origin; (2) Syphilitic tumor of the stomach; (3) Syphilitic stenosis of the pylorus; (4) Syphilitic cirrhosis of the stomach; (5) Chronic gastritis; (6) Perigastritis. It is evident, therefore, that the symptoms resulting from such a multiplicity of lesions will be varied in character and in severity. The symptoms most frequently encountered are pain, emaciation, tenderness; less frequently occur, in addition, hematemesis and melena. In some cases vomiting and pain after eating are the principal symptoms. After studying several cases and after reviewing much of the literature on this subject, the author comes to the conclusion that syphilis of the stomach has no clear cut symptomatology and no certain clinical findings; that the diagnosis is best made by the process of exclusion; that the X-rays are of great assistance in arriving at the correct diagnosis. He feels certain that many cases of syphilis of the stomach have been diagnosed as peptic ulcer or gastric carcinoma; and he believes that every case of ulcer of the stomach which does not yield to treatment by the usual dietetic measures should have a course of anti-syphilitic treatment before any surgery is done, and, likewise, that every case of suspected gastric carcinoma should be given a short intensive course of antiluetic treatment, in the hope that such a therapeutic procedure will establish the diagnosis of syphilis, if it is present. The treatment of syphilis of the stomach should be the same as the treatment of syphilis in other organs. In those cases in which pyloric stenosis occurs, gastroenterostomy is usually indicated, in addition to the antiluetic treatment.—*The New York Medical Journal*, 1919.

Prevention of Rabies by Cauterization.—Regan and Silkman are very emphatic in their belief in the value of cauterization following the bites of animals suspected of being rabid. They condemn the ordinary method such as cauterization by carbolic acid, silver nitrate and thermocautery in that they "seal up the virus" by coagulating the albumen of the tissue cells. They say that nitric acid does not possess this disadvantage for by virtue of its own power of diffusability and penetration it may destroy the virus in cases in which the other chemicals would have no effect. It is especially valuable in cases of bites treated late, even as late as 72 hours. It produces little scarring and the resultant wound heals well. For the utmost effect the nitric acid must be "fuming."

Previous to cauterization the wound should be squeezed to encourage bleeding, and should be thoroughly washed with mercuric chloride solution (1-1000). A wet dressing of the same should be applied after the cautery has been used.

If the wound be a punctured one and cannot be properly cauterized, it should be laid open with a scalpel sufficiently to allow proper treatment.

A bite should not be sewed up. If sutures have been introduced before the patient appears for treatment they should be removed and cauterization should be performed.—*The Archives of Diagnosis*, Vol. 11, No. 4, Page 237.

Benzyl Benzoate in Dysmenorrhea.—Litzenberg following the suggestion given by Macht used Benzyl Benzoate quite extensively in dysmenorrhea which, while he admits that his series of cases is too small to be conclusive he feels that the drug is, nevertheless, one of great promise. Of the 43 relief was obtained in 81.3%.—*Journal of the American Medical Association*, August 23, 1919.

(If all that Litzenberg has said about Benzyl Benzoate in dysmenorrhea proves to be true, oophorectomy for the cure of painful menstruation bids fair to become a thing of the past. The drug is well worth the trial.—Eds.)

Revival of an Old Suggestion in the Treatment of Heart Failure.—For two years past Dr. Beverly Robinson, who is an old practitioner, has adopted sublingual medication with hypodermic tablets of tincture of strophanthus as preferable to swallowing by the mouth. The gastric fluids are apparently antagonistic to the stimulating effect of strophanthus. In the tablet form he makes use of, strophanthus sublingually is quite as rapidly effective as if it were given hypodermatically.—*Medical Record*, August 23, 1919.

Pharmacological and Clinical Study of Benzyl Benzoate.—For a number of years Macht has been making a study of the opium alkaloids and has demonstrated that each has its own specific action and that there are numerous instances in which the administration of opium has a decidedly different therapeutic effect than those obtained from the administration of morphia or other alkaloids. The present study related particularly to the papaverin group of opium derivatives. It was early discovered that this had a remarkable influence in lowering the tone of smooth muscle fibre. Acting upon this suggestion by Dr. Macht, Dr. J. T. Geraghty injected papaverin directly into the urether of a patient and in that way facilitated the expulsion of a small ureteral calculus.

Experiments explained furthermore the observation that opium is more efficient in allaying the pains than morphine when given alone.

Macht has moreover, studied the influence of the opium alkaloids on the smooth muscles. The smooth muscle structures thus studied were the intestine, pyloric rings, uterus, gall bladder, urinary bladder, biliary ducts, seminal vesicles, vas deferens, bronchial rings and rings of excised arteries. As a result of these investigations he was led to conclude that the action of opium alkaloids on all kinds of smooth muscle structures is the same as that described in connection with the ureter, namely that the morphia group stimulate contractions and increase tonus, while the papaverin alkaloids inhibit contractions and lower tonicity.

The above observations led the author to surmise that similar effects might be produced by the combination of the benzyl grouping in some similar form and accordingly benzyl benzoate was selected as the one which could be administered without toxic effects. Experiments showed that this produced the same pharmacological effects as papaverin and that it was much less toxic.

Therapeutically the drug was administered with good effects in the following conditions: 1. Excessive peristalis of the intestine such as in diarrhea and dysentery. 2. Intestinal colic and enterospasm, both of a postoperative and other character. 3. Pylorospasm, whether of functional character or produced reflexly by ulcers and neoplasms. 4. Spastic constipation, in which there was a spastic condition of the intestine. 5. Biliary colic. 6. Ureteral or renal colic. 7. Vesical spasm, of the urinary bladder. 8. Spasmodic pains originating from the contractions of the seminal vesicles. 9. Uterine colic. 10. Arterial spasm. Numerous cases were reported by the author in which remarkable lowering of the blood-pressure was noticed by the administration of the remedy. 11. Cases of bronchial spasm. The author recommends Benzyl Benzoate as a remedy for bronchial asthma based upon the experience of at least 200 cases.

Benzyl Benzoate is marketed in 20% alcoholic solution. The dosage seems to be quite elastic ranging from 10 to 30 minims. It appears to be nontoxic in all reasonable dose. It is not in any sense a narcotic or habit forming drug.—*Journal of American Medical Association*, August 23, 1919.

Effects of Tobacco.—P. Chalmers Harrison points out that while the chief constituent is, according to Wilcox, 0.5 per cent nicotine in the Turkish leaf, to a maximum of 11 per cent in other tobacco, yet the poisonous alkaloid is more or less decomposed in smoking, so that tobacco generally contains a smaller proportion of the poison than the dried leaf, but also other deleterious agents, such as paradine, picoline, lulidine, collidine, paroline, coridine, rubidine, small quantities of hydrocyanic and acetic acids, creosote, sulphur and carbon compounds.

From a life long study of the subject, Jameson concludes:

Tobacco must be considered a slow poison if used in any considerable amount and the general opinion that it is always injurious to the young is correct as it is a poison to the young immature cells.

There are, however, marked differences in the susceptibility, and the grown individual should weigh his own idiosyncrasies as a guide to its use.

The existant physical well being in the early life of a smoker is not always

an index to harmlessness as degenerative symptoms may and do appear after many years of toleration.

Frequent, although intermittent, vascular stimulation must tend, according to the law of cause and effect, to arterial degeneration, and excess undoubtedly tends to circulatory and nerve degeneration,

Probably, what is generally regarded as moderate smoking, the equivalent of five or six cigars a day, borders on an immoderation from the standpoint of physical well being and longevity.

Tobacco undoubtedly is an antidote to worry, promotes good fellowship, renders life more bearable, is one of the least dangerous of the seminarcotic group and above all does not demoralize.

In many instances the balance of good outweighs the bad influence on body and mind.

To render its use comparatively innocuous and at the same time to derive the joys of peace, calm and solace, it undoubtedly bestows much greater moderation and limitation of its use should be advocated, and if it were made less of a continuous habit, and its use confined to times of worry, mental stress and turbulance, and occasional good fellowship, it would be better for the physical well being of the world who smoke.—*Long Island Medical Journal*, April, 1919.

DERMATOLOGY

Conducted by Ralph Bernstein, M.D.

Dermatitis Factitia.—In the practice of dermatology feigned eruption or cutaneous mutilation is frequently met with. C. A. Simpson, of Washington, D. C., has reported a series of four cases of this type. The lesions are most frequently encountered in hysterical girls who mutilate themselves in order to create sympathy or to avoid some irksome duty. The condition may vary from a mild dermatitis to a gangrenous lesion. Simpson's cases were more particularly interesting because they were able to deceive the attending physicians for a long period than from the standpoint of the actual injury or damage done.

The majority of these cases exhibit such evident artificiality that the experienced dermatologist has no great difficulty in making the proper diagnosis. In the first place, the lesions are invariably in accessible locations and usually assymmetrically arranged. The borders are usually sharply defined, pointed and angular, and the lesion itself is apt to be striped, band-like, disc shaped, or have some fantastic outline different from any other known skin lesion. Beyond the sharply defined or irregular border there may be one or more drop or streak shaped erosions indicating where the irritant may have been spilled or run, or the deception may be betrayed by traces of the agent employed having been left upon the skin or clothing, such as particles of mustard or the yellow stain of nitric acid.—*Jour. Cutan. Dis.*

Petrol Dermatitis.—Petrol dermatitis must be more or less familiar to many connected with the air service during the war. Page reports having seen a number of cases during approximatley two years with the Royal Naval Air Service in Flanders, G. B., and says that the condition is caused by the more or less prolonged contract of petrol soaked clothing with the skin, and that it very often accompanies aeroplane crashes wherein the occupants of the plane may be bound by the wreckage and after being extricated may be

too badly dazed or injured to remove their clothing in order that the petrol may evaporate. If uninjured those without experience may delay changing their clothing until they are warned by the burning pain that something is wrong. Sometimes the condition is occasioned during and between flights by leaking tanks or connections, and Page reports having seen two cases which were in no way related to aviation.

The area of the surface involved is often quite large, and the lesion looks like a burn or scald of the first or second degree; that is to say, there is erythema and some vesication accompanied by the burning pain.

With respect to treatment; it is well known that grease of any kind increases the discomfort. Lead lotion applied on lint, or zinc carbolic lotion sponged on is the best application at first; to be followed by some simple dusting powder when the symptoms subside which fortunately they do rapidly. The affected portions should be left uncovered in warm weather or a cradle used to support the bed clothes.

In attending an aeroplane accident Page emphasizes the importance of immediately noting whether the patient's clothing is saturated with petrol, and the removal of it as soon as circumstances will permit.—*Practitioner.*

Relation of Lupus Erythematosus Discoides to Tuberculous Infection.—Since the first description of lupus erythematosus by Cazenave in 1851, one of the obscure problems of dermatology has been the etiology of this disease. Up to about the year 1910 all investigations tended to show that lupus erythematosus was in some way related to tuberculosis. In recent years, however, some doubt has been cast upon this theory. In fact, a large number of the authorities are on record against it, although many of them believe that it is of toxic origin and should be classed with the polymorphic erythema group of skin diseases. The basis of the tubercle toxin theory was the frequent finding of evidence of tuberculosis both clinically and postmortem. In a large proportion of cases of this disease four things have been observed, namely, a family history of tuberculosis; a positive reaction to the tuberculin test; that there is clinical evidence of tuberculosis, and that evidence of tuberculosis was found postmortem. Twelve cases of lupus erythematosus discoides studied by Weiss and Singer were approached from as many different angles as possible. They were carefully examined for tuberculosis. All available diagnostic methods were employed, and the conclusion was reached in each case by studying all the combined results rather than from any single diagnostic procedure. Ten of these patients show unquestionable evidence of tuberculosis, past or present, and it is believed that the remaining two are also tuberculous.

The evidence presented in the past to prove that lupus erythematosus discoides bears a relation to tuberculosis is purely presumptive. Its critical analysis shows that the conclusions drawn from it are based upon erroneous deductions. In the opinion of the author no evidence has yet been presented that shows a relation between lupus erythematosus discoides and tuberculous infection or tuberculous disease. It has been shown that tubercles, past or present, may be demonstrated in practically all cases of lupus erythematosus discoides, but this fact should be interpreted as further evidence of the ubiquity of tuberculous infection and not as that of an etiologic relationship between the two diseases.—*Amer. Jour. Med. Sci.*

PEDIATRICS

Conducted by C. Sigmund Raue, M.D.

Arachidic Bronchitis.—The term "arachidic bronchitis" is applied to a special form of bronchitis encountered in children and caused by the aspiration of peanut kernels into the lower air passages. In plain English it is known as "peanut bronchitis" and we are indebted to Chevalier Jackson for calling the attention of the profession to this interesting condition and for the detailed description of the clinical features of the same (*Arachidic Bronchitis, Chevalier Jackson, M. D., and Wm. H. Spencer, M. D., Jour. Amer. Med. Asso.*, Aug. 30, 1919.)

The symptoms resemble those of laryngeal diphtheria in a striking manner, so much so, in fact, that diphtheria antitoxin has frequently been administered although laryngeal smears and cultures show no diphtheria bacilli. Dyspnoea is the leading symptom. There is also marked toxemia, probably due to the absorption of toxins from the difficulty expelled lung secretion.

A dusky cyanosis is often present. Sometimes there is pallor. This usually comes later, as a result of excessive heart strain. Distressing cough is a constant symptom; it may be paroxysmal and accompanied by pinkish-gray, thick, tenacious sputum difficult to dislodge.

The temperature is of the irregular, septic type. The pulse and respirations are enormously high in proportion to the temperature.

The physical signs reveal a generalized diffuse bronchitis with an accentuation of the signs at the site of the foreign body. The "asthmatoid wheeze" is present in the large majority of cases. The sign has been described by Jackson in a previous article "*A New Diagnostic Sign of Foreign Body in the Trachea or Bronchi*," *Amer. Jour. Med. Sciences*, Nov. 1918.

The sign is a wheezing sound of dry character heard by placing the ear at the open mouth of the patient and requesting him to make a forced expiration. The wheeze perishes after practically all secretion has been coughed out of the air passages and is often quite loud. The patient rarely loses the voice which is an important sign of differentiation from diphtheria. Limitation of motion of that portion of the chest supplied by the occluded bronchus is also noted. The authors conclude their paper with the following observations:

1. The aspiration of peanut kernels into the bronchi of children causes a definite syndrome which we term arachidic bronchitis.

2. There seems to be some inherent property in the peanut rendering it far more irritating than other forms of foreign body in the bronchi.

3. The instances which we have seen of this arachidic bronchitis have all been in children, and the younger the child the more severe was the reaction.

4. The pathologic conditions consist of an edematous, purulent, laryngotracheobronchitis which, if not fatal, results in lung abscess.

5. The symptoms are due to (*a*) the swelling of the mucosa of the air-passages, resulting in dyspnea and cyanosis, and (*b*) the accumulation of the difficulty expelled purulent lung secretions, and the absorption of toxins therefrom, which results in fever and other signs of toxemia. The condition

must be differentiated from laryngotracheal diphtheria and influenzal laryngotracheobronchitis.

6. The prognosis is grave if the peanut is not removed. The younger children succumb quickly to exhaustion and toxemia. If the peanut is promptly removed, convalescence is usually rapid. Resistance in the older children renders the course more protracted, but lung abscess ultimately results.

7. The treatment consists in early bronchoscopic removal of the peanut in the cases in which there is only slight dyspnea. In cases in which dyspnea is marked, tracheotomy may be required to pipe air to the lungs and to facilitate the removal of the viscid, purulent secretions, a bronchoscopic removal of the peanut through the mouth to be effected as soon as the wound has sufficiently granulated.

8. The number of the cases and the definiteness of the symptoms, together with the serious nature of the reaction, warrant the inclusion of arachidic bronchitis among the diseases affecting the lower respiratory tract of children.

The Diagnosis of Congenital Hypertrophic Pyloric Stenosis and Pylorospasm.—The differentiation between hypertrophic pyloric stenosis and pylorospasm is often beset with difficulties and Tarr (*Archives of Pediatrics*, March 1919), makes a plea for careful history taking and repeated observations of the infant both during and directly after feedings to help in the early recognition and differential diagnosis of these cases. The important points in the history are the age of the patient, the temperament of the parents, the nature of the feedings, when vomiting first appeared, whether the vomiting was collective or projectile, its relation to feeding time, the character and size of the stools, loss in weight.

Inspection reveals signs of distress or discomfort, gastric distention, gastric peristalsis and the area over which peristalsis is visible. Palpation of a tumor is the most positive evidence in favor of a stenosis. A tumor can be felt through the relaxed belly wall. The tumor is not constant but it is usually a little to the right of the median line and about midway between the tip of the ensiform cartilage and the umbilicus. In pylorospasm a tumor can also be felt at times but it slowly relaxes after vomiting.

Conclusions:

Stenosis and spasm of the pylorus are relatively common among infants.

The general practitioner should be able to recognize these conditions.

A careful history will usually make the diagnosis easy.

UROLOGY

Conducted by L. T. Ashcraft, M. D.

A Case of Surgical Junk.—Shearman Peterkin, of San Francisco (*Urologic and Cutaneous Review*, July, 1919), in using this title, refers to the case of a man who had several operations performed without producing appreciable improvement in his condition or securing normal urinary function. When seen by the author, Aug. 1, 1917, the patient was able to force a stream of urine four feet through a suprapubic fistula of a diameter of an ordinary silver probe. No urine could be voided through the urethra; yet immediately

after voiding through the fistula, a pint and a half of urine could be withdrawn by the use of a catheter. Two previous cystotomies had not improved the condition, and no cause for this could be discovered. Several times the resulting fistula had been induced to heal, and had later, after an attack of chill and temperature, reopened. A careful examination by the author revealed a false passage from the bladder into the region of the veru montanum. A flap of prostate acted as a ball valve, shutting off the urethra; so that efforts at urination forced the stream along the path of least resistance, the fistula in the suprapubic region. An operation for the relief of the condition resulted in complete recovery. The author makes a plea for an early cultivation of tactile sensibility, so that the surgeon may be able to use dexterity, instead of force, in employing instrumentation, and thus avoid the production of false passages. He believes that scientific equipment and organization will increase the efficiency of the special senses and result in a greater percentage of correct diagnoses. The author recommends the employment of what he terms open technique, which admits of the use of as many of the special senses as possible, combined with mechanical aids.

The Quarantining and Treatment of Venereally Diseased Persons in Louisville.—A. M. Barnett (*Urologic and Cutaneous Review*, August, 1919), gives a description of the system of caring for those suffering with venereal diseases that has been adopted in Louisville, Ky., since the passage of the Kahn-Chamberlain Act, making funds available for this purpose. All women arrested for street-walking or other offenses against ordinances concerning immorality are examined at the jail and, if found diseased, are sent to the Louisville Public Hospital. Those with gonorrhea receive irrigations of iodine and permanganate of potassium and injections of silvol or protargol, together with the application of tincture of iodine and vaginal tamponing, if necessary. In some of the chronic cases, gonococcus mixed vaccines have been used; but the author is doubtful regarding their efficacy. Operations for pyosalpinx have been performed in a number of cases. These gonorrheal patients are not allowed to leave the hospital until negative results have been obtained from five properly taken smears from the secretions of the urethra, cervix and Bartholin's glands. In the case of those suffering with syphilis, salvarsan is injected once a week, in doses of five to six decigrams, until six injections have been made. In addition, fifteen intramuscular injections of mercury salicylate are given. When these persons are considered to have been made noninfectious, they are permitted to leave the hospital on parole, with instructions to return for further treatment later by the physicians connected with the hospital or to have this administered by their own doctors. Over 11,000 injections were given before Jan. 1, 1919, there being 240 patients under treatment at that date.

Prostatectomy.—G. Kolischer, (*Texas Medical Journal*), of Chicago, recommends that both arms, near the axilla, and both legs, near the inguinal fold, be constricted by a rubber bandage for twenty minutes before performing prostatectomy, in order to lessen the amount of hemorrhage resulting by confining about one-third of the total blood supply of the body to the limbs. Another advantage of this procedure that he claims is that the rush of blood from the extremities that takes place after the removal of the constriction on the completion of the operation will assist in producing a

rapid recovery from the effects of the anesthetic. The introduction of a Barnes bag into the rectum and its distention with 100 c. c. of water will push the trigone upward, and, according to the author, make the prostate more easily reached. After carrying out this technique, he empties the bladder with a catheter and injects 300 c. c. of a 2 per cent. solution of protargol. The author believes that by producing occipito-caudal tractions with retractors, after the bladder incision has been made, he is able to secure a much more satisfactory exposure than is possible by means of lateral traction. He incises the mucous membrane with a pointed knife, somewhere between the opening of the urethra and the circular groove around the base of the enlarged prostate, for a distance of about two inches, and carries the incision down into the lighter-colored substance of the prostate. He does not believe in inserting his finger into the rectum for the purpose of assisting in the enucleation, because of the danger of contamination with fecal contents. After delivering the tumor, he separates it from the urethra by cutting, and temporarily checks hemorrhage by means of a gauze pack. A mass of fat that has been taken from the abdominal wall immediately after making the skin incision is then substituted for the gauze pack, and is pressed well down into the bed from which the prostate has been removed. If necessary, another gauze pack is placed on top of this lump of fat. The bladder is drained with a rubber tube half an inch in diameter, fastened to the upper angle of the wound with a purse string suture. A rubber drain is also inserted into the space of Retzius. He does not believe in using the suction apparatus, on account of the likelihood of its loosening clots and producing a secondary hemorrhage.

One Aspect of Syphilis as a Community Problem.—Newcomer, Richardson, Ashbrook and Lewis (*Am. Jour. Med. Sci.*, Aug., 1919,) describe in detail the method of treatment in the Syphilis Clinic of the Pennsylvania Hospital. This clinic employs a social service worker, who instructs the patients, referred from various branches of the Out-Patient Department, in regard to the seriousness of the disease and the absolute need of lengthy treatment, investigates their pecuniary resources, hunts up those who do not come back to the clinic at the time appointed, and does everything in her power to help and advise them. Comparatively few of the women patients are single, and about one-quarter are the wives of male patients of the clinic. The very poor seem to be lazy and indifferent, and usually fail to return after a few treatments. The prostitutes also soon disappear. The authors believe that it is only a waste of time to try to do very much for such patients, unless they are in the infectious stage of the disease. About ten per cent. of the patients have received free treatment; but usually, four dollars a dose is charged for the salvarsan. It has been found that the average patient can afford this amount. The experience of the authors leads them to believe that it is quite possible for any well-organized general hospital, without great expense, to establish a clinic for the treatment of syphilis.

Submucuous or Physiological Implantation of the Ureter into the Large Intestine.—Coffey (*Urologic and Cutaneous Review*, August, 1919,) describes in detail the steps of this operation, which has the following advantages: The ureter empties into the bowel in the direction of the long diameter of the latter, and from above downward. The ureter is protected by the muscular coat of the intestine.

The implantation is made into the lower bowel, which, except during defecation, is normally empty. The ureter is buried in the wall of the rectum for an inch or more longitudinally, with the result that during defecation, the feces exert pressure from above downward on the mucous membrane over the ureter, thus emptying and closing it. Mayo, the author states, has made certain modifications in the technique of this submucous operation, thus simplifying it and perfecting it for clinical use. The author states that while he has not had nearly such a large number of cases to report as Mayo has already published, his own smaller experience has been equally favorable. He reports four cases in which six ureters were implanted, and in which function afterwards was apparently perfect, and also a case in which a seventh ureter was implanted into the cecum, but in which the function of the kidney afterwards is not known, although the patient seems to be in good health. He believes that his own experimental work and limited clinical experience, together with the much wider experience of Dr. Charles H. Mayo in the operation of submucous implantation, is sufficient to place this operation on a justifiable basis. The author, in conclusion, emphasizes the following points: That the essential procedure in conditions requiring removal of the urinary bladder is the implantation of the ureter into the large intestine; and that the ureter must be made to run under the loose mucous membrane for a certain distance before entering the lumen of the large intestine.

SURGERY

Conducted by J. Dean Elliott, M. D.

An Experimental Study of the Use of Detached Omental Grafts in Intestinal Surgery.—Finton and Peet chose as the objects of their experimental work to determine: first, what became of free omental grafts when placed on the intestine under sterile and under septic conditions. Second, the size, thickness and vascular condition of the graft which would insure the best vitality. Third, the preferable method of its application to the intestinal wall to insure its vitality and prevent its displacement. Fourth, a method to prevent adhesions from adjacent intestines and omentum to the free graft. Fifth, in what surgical conditions would the use of free omental grafts be justified, useful or necessary.

It was found that the best results were obtained by the following technique: the piece removed should be on the free border of the great omentum. The latter should not be markedly puckered and the cut edges should be covered. The graft must be thin, spread out carefully over the injured part, the cut edge rolled under, and fastened in place by several fine silk sutures.

The conclusions reached were: The use of detached omental grafts is preferable to fixed grafts except in the presence of general infection. They may be used on any abdominal organ. The indications are to replace lost portions of peritoneum; to strengthen suture lines; to prevent adhesions; to check hemorrhages; to occlude the pylorus; to cover the stump of the cystic duct or fallopian tube; and to reinforce the peritoneum in threatened perforations. The technique is simple and may be performed with little trauma and in a minimum period of time. In the absence of infection the thin graft survives at least 6 months practically unchange d.—*Surgery, Gynecology and Obstetrics*, September, 1919.

The Treatment of Melastatic Carcinoma of the Spine by Deep Roentgentherapy.—Pfahler reports four cases of metastatic carcinoma of the spine, in all of which there was undoubted destructive disease due to carcinoma and in which he was able to demonstrate by roentgenograms not only the disease but the healing and healed process. Symptomatically the patients showed either marked improvement or complete recovery.

The object of the paper was not to recommend roentgentherapy in such advanced carcinomas for the author believes that metastases of the spine is not a localized area of disease but a part of a generalized carcinomatosis. The local disease can be influenced but it is impossible to permanently cure such a patient by any means we know of today. However Pfahler does wish to encourage the early use of roentgentherapy, not as a substitute for operation, but in combination with it, instead of waiting for general carcinomatosis, metastases or local recurrence.

After detailing the four cases and describing the technique which he used, he draws the following conclusions: 1. The roentgen-rays when applied properly and in sufficient quantity upon deep seated cancer tissue may be expected to destroy the cancer cell, and this cancer cell is replaced by healthy scar tissue, or fibrous tissue. When the disease is located in the soft tissues it is replaced by fibrous tissues, and when located in bone it heals by bone sclerosis.

2. As a result of this healing process, the patient is given the prolongation of life, and is made more comfortable.

3. One can not expect the patient to make a complete, permanent recovery, for ultimately the disease is apt to show metastasis particularly in the areas not treated.

4. It is entirely likely that these metastatic carcinomata of the spine without other evidences of metastatic involvement have an unusual amount of natural resistance, and that this increased resistance on the part of the patient helps us greatly in the healing process. It seems to me likely that many of the patients, or most of the patients, die of visceral involvement, before there is time enough for symptomatic disease to develop in the spine, and so it is only in the more resistant cases that there is time enough for spinal metastasis.

5. With the clinical and microscopic proof of the destructive action on malignant tissue followed by a healing process, and with the experimental proof of a disease in the malignancy of cancer tissue which has been exposed to the X-rays and a decrease in its capability of inoculation, we can recommend most strongly the use of deep roentgentherapy both as an ante-operative treatment to be followed immediately by operation and then post-operative treatment given after the proper interval, which should be four weeks after the ante-operative treatment.—*Surgery, Gynecology and Obstetrics*, September, 1919.

Surgical Treatment in the Bleeding Type of Gastric and Duodenal Ulcer.—In a well illustrated article Balfour calls attention to the difficulty that sometimes surrounds the decision as to the cause of gastric or gastro-intestinal hemorrhage and states that the spleen and liver should be particularly borne in mind as causative factors.

A study of the cases of gastric and duodenal ulcer treated by gastro-enterostomy at the Mayo Clinic during the twelve years from 1906 to 1918

discloses that 12.7 per cent. of the patients who had had hemorrhages from duodenal ulcers before operation subsequently had recurrence of it, sufficient in two cases to cause death, and 0.9 per cent. of the group who had not reported hemorrhages before operation had them following it. 8 per cent. of gastric ulcer patients who had had hemorrhage previously and 0.3 per cent. who had had none have reported hemorrhages after operation. While these figures, which are 2 per cent. of the total number treated for duodenal ulcer and 1 per cent. for gastric ulcer, may appear small they represent 100 patients who have had gross bleeding following operation.

The advisability of destroying or excising a gastric ulcer on account of the danger of malignant degeneration in it has been a well established principle, but this danger is not present in duodenal ulcer and such a radical operation has not been considered advisable or necessary. It is significant to know that hemorrhage did not occur in any of the 83 patients with gastric ulcer after the ulcer had been destroyed. After careful consideration of various methods it was decided that the best way to prevent future hemorrhages in both gastric and duodenal ulcers was by combining excision with gastro-enterostomy. As this operation when performed with the knife is often a formidable procedure, the actual cautery is now being used to destroy the crater of all, easily accessible, duodenal ulcers as well as those of the stomach.

The technique is not difficult; the crater, usually containing a minute perforation, is exposed and an opening, as large as the crater, is made with the cautery. It may be necessary to shave off a thin layer of the thickened peritoneal coat to expose the perforation. The opening is then closed in the usual manner.—*Journal of the A. M. A.*, August 23, 1919.

The Relation of Pathology to Practice.—Wood decries the recent neglect of pathology. This is shown in many ways: in a diminution in the volume of published work; in the lessened number of necropsies performed and in the same smaller number of men actively engaged in it. He feels that there are still some things to be learned in morbid anatomy, in spite of the recent progress in biochemistry and serology. He blames faulty medical instruction for the lack of interest and believes that the cause of so few necropsies is that the physicians are at present more interested in functional tests than in the anatomic findings of disease. Yet if these tests are to become a permanent part of our medical knowledge they must include some morphologic foundation.

His summary is: Pathology is today confined too largely to medical schools and teaching hospitals. As it is the foundation of all medicine, the student should be inspired to carry on its study as a part of his practical life. The physician must know and use it to temper his diagnostic and therapeutic enthusiasms. While the diagnosis and treatment of the individual suffering from disease is the art of medicine, we must not become so busy as to neglect the science of medicine which concerns the future of the race.

The surgeon also needs pathologic training to enable him to make a certain diagnosis when some unexpected lesion is discovered during the course of an operation. He needs tumor pathology above every thing else, for unless he knows it, the operative results on cancer cannot be improved upon as they should be. A knowledge of pathology, in other words, is essential for correct diagnosis and treatment.—*The Journal of the A. M. A.*, August 23, 1919.

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THE UNDERNOURISHED CHILD OF PRE-SCHOOL AGE.

BY

JULIUS LEVY, M.D., TRENTON, N. J.

(Read before the Pennsylvania State Homœopathic Medical Society, Sept. 16, 1919.)

WHILE I shall discuss the malnutrition of the children of pre-school age, principally from the pediatrician's view-point, I wish to refer to what may be called the social or public aspect of this question. Considerable publicity has recently been given to the great amount of malnutrition that was found among children weighed and measured during the past two years and it was stated that this was in part the result of the high cost of living and the difficulty of obtaining sufficient food for the family. If the findings are scientifically correct it is most important that the public shall be informed of the situation, but there is surely a grave responsibility for anyone to publish statements that will increase the feeling of dissatisfaction and unrest that pervades the country if they are founded on inaccurate or insufficient data.

Now, most of the estimates upon which the extent of malnutrition was reported were based upon the method of considering a child as suffering from malnutrition if it was more than 10 per cent. under the weight of the average child of its age. From our clinical experience with children of different families and different races and nationalities, we felt very strongly that this method disregarded what was the normal or average for children of various nationalities and so we carefully analyzed the records of some five hundred children

who were examined at the pre-school clinics of the health department by nativity of their grandparents.

An analysis of these figures, when we compared the weight to the average for the age, irrespective of the nationality or race of the child, showed 37 per cent. to be underweight. When, however, we estimated the number that were underweight in proportion to their height, this was very considerably reduced. But when we considered only those as suffering from malnutrition who could be considered underweight after proper consideration was given to their weight at birth, the stature of their parents and the tendency of growth in their race, we found that the examining physician classified 7 per cent. in this group.

In making up the records we have been recording the nativity of the grandparents. It does not require much thought to realize that the nationality, "American," would tell you very little about the tendency for growth in a particular child as the ancestors might be of the stalwart Norsemen, or of the small-boned southern races.

An appeal to experience is often illuminating where statistics are confusing. We have all marvelled at the fine stocky baby of the Polish mother, though it was kept in crowded quarters, badly fed, and poorly housed; and on the other hand those of us who deal with babies and children in our private practice have anxiously tried to add fat or height or weight to the Italian babies, only to realize finally that their growth and development seem to be determined by some other rule than that influencing the Polish babies. This idea must be more generally recognized by persons who are in the position to collect and publish data referring to the nutrition of children, and have a tendency to make deductions that have a social implication.

I think I can illustrate, then, what is in my mind by turning naturalist for the moment. I had occasion to discuss the weighing and measuring of children with a popular writer of animal stories, who said that he thought he could write a very amusing story for children by having a weighing and measuring test in animal land and describing the mortification, chagrin and grief of mother Black and Tan or of mother Scotch Terrier because their babies were considerably under the weight of the average dogs. In truth, Mrs. Pekingese was simply heart-broken when she saw the baby of Mrs. St. Bernard. Of

course, someone consoled Mrs. Pekingese by telling her that quality was more important than quantity, and that Mrs. St. Bernard was a different kind of dog anyway. But Mrs. John St. Bernard, who did not know of the law of heredity in selecting the father of her baby, was quite distressed when she was told at the weighing contest that her baby was 10 per cent. under the weight of average St. Bernards.

From a clinical standpoint, malnutrition will require study as long as mothers will see the fat rollicking baby pass into the gawky, elongated child of the pre-school period. While the condition is not always a disease entity, it forms such an important part of private practice, particularly of the specialist in children's diseases, that it is worth while to consider the syndrome, on account of which mothers bring children to us for advice.

Description and Symptoms.

I would give first prominence to symptoms that indicate fatigue. Mothers will speak of lassitude and particularly the absence of the play instinct which is so characteristic of children of the romping age. They will also tell us that the child is quickly fatigued, irritable, restless and shows a tendency to quarrel with playmates and to whine and cry upon the least provocation. Physically, the child is usually found to be slight in build and pale in appearance, although it is well to keep in mind that children may be suffering from malnutrition, though they are normal in weight, this weight consisting of either edema or fat; the glands are usually enlarged and frequently there is evidence of rickets—that is, there are malformations of the chest walls, thickening at the junction of the ribs and cartilage, a distention of the abdomen or "pot belly," lordosis and deformities of the extremities and skull. The gastro-intestinal symptoms vary considerably. Some mothers will report that their children have no appetitie, indeed eat nothing at all, all day, and others that their children seem to eat a great deal but are not benefited by it. Constipation is usually present, but it is not always of the same character. Many children will have a daily movement, but it is apt to be light colored, pasty and very foul. A certain number of cases present the story of a very large semi-solid stool, two or three times a day, which frequently contains a good deal of mucus. In some instances the stools are very dry and hard, and again in other

cases the constipation alternates with a slight diarrhoea. It is well to keep in mind these various types of constipation and to realize that while they will be found in various cases of malnutrition they are the result of varied etiological factors, and, therefore, require different management. Duodenitis—fat indigestion—more rarely infection by bacillus aerogenous capsulatus—at first described by Herter—must be considered in determining upon the proper treatment.

I think particular attention should be directed to the frequency with which syphilis will be found as the cause of malnutrition. I have made it a rule to examine for this condition in every child suffering from malnutrition where other explanations did not seem satisfactory. It is also frequently merely the continuation of malnutrition in infancy. This is most clearly shown in those groups of cases in which there is evidence of rickets. It is also well to remember that a great deal of the malnutrition of early child life is the result of contagious disease, which either has been ignored or neglected because it was considered one of the diseases every child must contract sooner or later, or because the mother was not properly advised in the management of the child. Measles and whooping cough will occur to us as illustrating these points. Every attempt should be made to postpone, if we feel we cannot entirely prevent, a child contracting these so-called mild diseases of childhood, which statistics prove cause a larger number of deaths in young children than the so-called serious diseases of diphtheria and scarlet fever.

Management and Treatment.

Prevention.—The extensive use of pertussis vaccine as a preventive will save many lives and prevent much malnutrition, but even though we cannot at the present time extensively employ this vaccine, we should make every attempt to reduce to a minimum the frequency and the severity of the paroxysms because we all know how debilitating whooping cough is to the young child. There is also need and opportunity for the doctor to carefully advise mothers how to care for and feed the young child with whooping cough so that its nutrition may be protected to the fullest extent. In measles and similar apparently mild contagious diseases, we are dealing with toxemias that interfere with nutrition more indirectly; that is, it has been noted that a child will be suffering from

mild myocarditis or a slight heart murmur or a mild nephritis after it has recovered from measles or other so-called mild diseases. We can do a great deal to prevent the effect of these diseases by seeing that all children with temperature shall remain in bed and that all children who are suffering from any form of infection or toxemia shall be given sufficient rest, fresh air, and food to maintain their nutrition during this period. It is estimated that 2 per cent. of all school children are suffering from heart disease. It is safe to say that a certain proportion of these cases are the result of improperly guarded mild infections.

In no group of diseases or disorders in childhood is it so easy to prevent and so hard to cure as in malnutrition. The feeding of the first year of life will determine to a very large degree the health and vigor of the child in its later years. We must remember that the brain undergoes almost all of its growth in the first two years. During this period of rapid growth the brain and heart undergo their most important development. The nutrition of the first two years of life is especially important for the normal growth of the brain. At birth the brain of the male child weighs eleven and one-half ounces; at three months seventeen and a half ounces; at six months twenty-one ounces; at one year twenty-seven ounces, and at two years thirty-three ounces. The brain then has tripled its initial weight and almost completed its growth, as can be seen from the fact that in the next five years the brain gains but seven ounces in weight and in the next seven years only six ounces. While the brain at birth is one to nine of the body weight, at fourteen years it is only one to twenty-five and in adults one to forty-three. The rapid growth of the brain is shown by the rapid increase in the circumference of the skull which at birth is fourteen inches, at one year eighteen inches and at five years only twenty inches, after which time there is hardly any increase at all.

The development of the heart is likewise rapid and influenced by the nutrition of infancy. In the infant the heart is .8 per cent. of the body weight, while in the adult it is .2 per cent. of the body weight. Its volume at birth is 23 cubic centimeters, and at 7 years 100 centimeters, after which time there is barely any increase in capacity.

Rickets, which can be prevented by proper feeding in the last six months of the first year, is the cause of mal-develop-

ment of the osseous and respiratory systems, anemia and deformities and pre-disposes the child not only to malnutrition but also to tuberculosis. Of course, the surest way of preventing malnutrition in the first year is to see that every baby is breast fed, and I wish to say from a study of 5,000 mothers, who were not among the 400 but among the 400,000 of the community, that 88 per cent. of all babies can be entirely breast fed six months and 96 per cent. at least partially breast fed six months.

In the latter part of the first year the nutrition, and by this I do not mean merely the weight, should be so watched that additional nutriment will be added when required whether the child is breast fed or bottle fed. And I wish to state that when we say additional nutriment we do not necessarily mean additional food, but refer particularly to a consideration of the vitamins and salts. I have frequently noticed a marked improvement in a child who received a half ounce of fresh cow's milk or one or two teaspoonfuls of orange juice or beef juice, or a dram or two of cod liver oil, or a few minims of phosphorus.

Fresh air—that is, moving fresh air—is very important to the nutrition of the child. You may recall the experiment with the cat which died when its body was encased though its head was out in the fresh air and which survived if its head was encased but its body was exposed to a current of moving air. There is an important lesson in this in the question of dressing and housing babies.

Before leaving the subject of rickets, I wish to mention what might be called a brilliant result recently obtained by the use of pituitary extract. A child 2½ years old, very small and with evidence of advanced rickets as shown by the marked thickening of the wrists and the bending of ribs, improved very rapidly after pituitary extract was exhibited, so that in the course of a few weeks the swelling of the wrists had entirely subsided and the child began rapidly to gain in weight. In the management of the child suffering from malnutrition, I would emphasize that the establishment of normal hygiene and normal diet is an essential beginning. By this I mean you must sufficiently instruct the mother to have her follow out the rules of hygiene and feeding, and she must be told exactly what to feed the child and what not to feed the child.

In a general way, I would say that children suffer from

malnutrition as frequently from overfeeding as from underfeeding, and that your purpose must be not to see how much food the child can receive but, rather, that it shall eat well-balanced meals at regular intervals and that the child shall obtain plenty of rest during the day and night.

Of course, I realize that you do not succeed in feeding a child or getting a mother to feed the child properly by merely telling her what it should receive, because her very reason for coming to the doctor is often that the child will not eat what it should eat or that it does not eat at all. In these cases I have had very gratifying results by telling the mother in the presence of the child just exactly what the child may eat and requesting the mother to write down what it does eat at every meal and to bring it to me at the next visit. I usually add, rather casually, that of course if the child does not or cannot eat these things its stomach is so weak that it will not be able to eat anything else. Now, if you can succeed in preventing the mother from saying to the child, "Henry, will you do what the doctor asks?" you will find that the mother will frequently come back to you with great surprise and pleasure and say that the child has eaten everything that was written on the diet list.

Inasmuch as most of the cases are suffering from a certain amount of distention and indigestion, it is well to start out in these cases by clearing out the intestinal tract. I have had good results by ordering an oil enema every day for a week in the cases that were constipated; and a high rectal irrigation in the cases that presented distention or diarrhoea. Pancreatin and bicarbonate of soda will often aid digestion in the beginning of the case.

I am not given much to the use of tonics in children with the exception, perhaps, of cod liver oil, arsenic and phosphorus, for I feel that diet, fresh air, rest and normal intestinal tract will meet all the indications. I should like to add just one word on the relation of mental influences in the feeding and nutrition of children.

I see a great many cases in children from the age of practically two years up that can be grouped under the classification of "anorexia nervosa" or neurasthenia or nervous dyspepsia, or, and this may be just as intelligible as other names, just "cussedness." If this type of child is pampered, fussed over, coaxed and worried over, the condition seems to get worse. If

the doctor succeeds in teaching the mother to adopt the method of neglect, by which I mean, for instance, to prepare a child's meal and then to remove it promptly if the child indicates it is not hungry, this child will very quickly acquire its appetite, eat its food, and regain its health. It will also seem to improve in its disposition and temperament to the great pleasure of the parents and the comfort of the neighbors.

To sum up, I would say that malnutrition in the child of pre-school age is largely the result of improper care and feeding in the first year of life; secondly, it is the result of unnecessary or improperly managed contagious diseases; and, thirdly, that it requires for its cure more the application of the rules of hygiene, nutrition, discipline and training than it does the administration of drugs and medicines.

PREVENTION OF ILLNESS AND NEEDLESS DEATHS OF LITTLE CHILDREN.

BY

DOROTHY CHILD, M.D., PHILADELPHIA.

Chief of Division of Child Hygiene of Pennsylvania.

(Read before the Homœopathic Medical Society of Pennsylvania, Sept. 16, 1919.)

Are the babies of Pennsylvania worth saving? Eight thousand deaths and eighty thousand illnesses may be prevented by the expenditure of time and money in an intelligent way. Throughout Pennsylvania there are groups of earnest men and women who have discovered the power of working together, and have used this power effectively to the eternal surprise and discomfiture of our enemies. Nearly all of these people, comprising all professions, all social strata, all ages, and all creeds, though ready to demobilize if no further task is assigned them, would be willing and eager to assume part of the huge responsibility confronting this State and this nation—Child Welfare.

Everybody loves children—the appeal is human. We must make a definite plan and present it in a business-like way. *The first step is a careful study of local conditions* as they relate to the care and welfare of the mothers, the babies and the young children of the community in question. A few suggestions follow:

1—Is the law requiring the registration of births enforced? What is the total number of births each year? What was the total number of deaths of children under one year, each year, for the last three years? Compare this with the number of living births reported each year. (Infant mortality rate means the number of deaths of infants under one year per thousand living births in the same year.) Find out the total number of deaths under one year old, during the summer months (June, July, August and September), and compare them with the number during the winter months. If possible, get the figures by districts and they will show where the need for preventive and educational work among the mothers is greatest.

2—What quality of milk is available for the babies who have to be bottle-fed? Does any one provide cheap milk and ice for the poor? Can cases of infantile diarrhoea be traced to any dairy or farm?

3—What hospital care is provided for obstetrical cases, for sick babies, for sick children? What provisions for dental and minor surgery, such as tonsillectomies, circumcisions and hernia operations?

4—Is any visiting nursing done? By industries, insurance companies, or local initiative?

5—What provision is made for the instruction of the expectant mother and for prenatal care? What is the character of the obstetrical service available? (Midwives, private doctors, physicians to the poor.)

6—Are there any infant welfare stations or feeding conferences, where mothers may bring their babies for periodic weighing and examining by physicians who advise on feeding and care? If so, are they filling the need?

7—What care is provided for the runabouts—the children between two and six years? Who supervises day nurseries, kindergartens and Sunday Schools? Are health lessons taught there? Are there frequent inspections for contagious disease? What is the present condition of local orphan asylums, temporary homes and private boarding houses for babies?

8—What have been the most common defects found by the routine examinations of school children in the district? Which of these could have been prevented or checked if the children were examined and advised during the pre-school

age? What proportion of the children for whom treatment was recommended received treatment? Do the teachers believe that the parents were indifferent or lacked funds to pay for treatment?

9—Are there any of the following institutions in your district: Training school for feeble-minded and backward children? School for the blind? For the deaf? Open air school for anemic and under-nourished children? Day camp for mothers and babies in hot weather? Corrective gymnasium? Classes for young girls and for mothers on elements of nutrition, on care of the baby, on problems of food, clothing and shelter? What practical instruction in personal and public hygiene do the children receive in public, parochial and private schools?

10—Is there a district within your county where housing is poorest, where overcrowding is the rule, where waste matter is not quickly disposed of so that flies become abundant in summer, where active cases of tuberculosis are many (as in foreign and negro populations), where standards of living are lowest because the people are the least resourceful, both in money and in mental faculties? Study this district in some detail, with relation to the infant death rate, the spread of contagious diseases and of the so-called "dirty air diseases," colds, bronchitis and pneumonia—whenever possible get the opinion of local workers who know the character of the people from long experience. Point out to your committee that by a concerted effort conditions can be ameliorated, and *must* be for the sake of the babies. *Having* made the preliminary study, you have a general idea where the need for work is greatest. The character and scope of the work will depend upon the number and ability of the volunteer personnel, and the money available for employment of public health nurses and establishment of health centers.

Child welfare work is war against definite enemies. These enemies are, briefly:

(1) Bad housing, which includes over-crowding; dampness from roof, walls, or cellar; inadequate ventilation; inadequate toilet facilities, and water supply.

(2) Exposure to tuberculosis and other communicable diseases.

(3) Improper diet, including dirty milk or no milk at all.

(4) General care unintelligent (from before the baby's birth).

(5) Medical or surgical care lacking or inadequate (includes untreated syphilis).

I would call your attention to the fact that not one hundred miles from here children and adults are being treated by "witch doctors" and "pow-wow doctors." I can take you to the house of a baby who suffers marked malnutrition and is being treated by one of these demonologists. Perhaps you don't know of the following treatment for malnutrition: Murmur a few words over the baby, walk down stairs backward, and bury one of its garments in the back yard.

To go back to the war we are engaged in—there is no great battlefield where a few large cannon, the health laws, may be turned upon the enemy. The children of our State are intrenched in a million homes where all too frequently no help ever reaches them. We propose that the babies be found by a local census, or enumeration, or survey—if you will—which finds at the same time the conditions surrounding the babies; and plans at the same time the program, whether educational, legal, social or medical, for the betterment of these conditions. Let the follow-up be intelligent; let it be planned and directed by a public health nurse who knows how; and let the people who are anxious to work, do the work. Activities should be centralized in a station or consultation center where well children are brought periodically by interested mothers for free examination and advice. When physical defects are found, such as carious teeth or hypertrophied tonsils see to it that no Pennsylvania child is neglected just because his father's wages are low; see to it that *health* and the *keeping of health* is taught in and out of school; and that the medical schools prepare the coming doctors in methods of prevention as well as diagnosis and therapy, and instruct them in the modern methods of social service.

DISCUSSION ON PAPERS OF DRS. CHILD AND LEVY.

Dr. C. Sigmund Raue opened the discussion and congratulated the Society in having the privilege of hearing these two papers. He himself had enjoyed them to the fullest extent and had gained a great deal of information.

If there was ever a time when it was necessary to try to cut down infant mortality, this is the time in the world's history. Statisticians have shown that there will be a shortage of man power, unless we do something strenuous; and the thing to do is to save those that we have and try to increase the population later on. At the Hahnemann Hospital we have established a Mothers' Clinic, Dr. John E. James having represented the maternity end of it, and the speaker having the children's end. There is no necessity of going into the details of a Mothers' Clinic, which is one of the most important methods of combating infant mortality.

The subject of malnutrition and the public notice of it, is something newer than infant mortality. The latter is an old subject, but malnutrition in older children is new. Dr. Emerson, of Boston, is one of the prime movers in this direction. He has figured out the weight and height of a child that is normal for each age, and what per cent. the child is below normal. We should know just what we mean by malnutrition. The speaker enjoyed Dr. Levy's paper, and looked forward to studying it thoroughly when published. He was glad to see that the writer takes a more thorough and scientific viewpoint than simply weighing and measuring the child, and figuring out that it is so much per cent. subnormal.

In the clinic of Dr. C. Smith, the method of Dr. Levy is followed. The story of the difference between the weight of baby dogs is a very clever way of bringing that subject home to us. Of course, malnutrition is not easy to diagnose. Take the type of constitution in which a child has a long, narrow chest and enteroptosis; and it is pretty hard to fatten such a child up to look like someone else's child, who happens to have the other type of constitution, with a wide costo-sternal angle. The child may be tall and thin, and yet be healthy, and may be short and fat, and be unhealthy.

The examination of the stool is a very important matter. In private practice the speaker examines the stool of every child with a nutritional disorder. He gives a test meal, and examines the stool in various ways. While the subject is more or less in its infancy, it gives very valuable data in regard to treatment. It is as important as the examination of the urine, and no more difficult. It seems objectionable; but after a while one overcomes that slight fastidiousness. When we pay as much attention to this as to the renal secretion, we have added a valuable asset to our work.

Dr. Charles Handy Smith, of New York, found in some schools as high as 30 per cent. of school children suffering

from malnutrition; and he classified the causes as organic and hygienic. Among the former, chronic tonsils and adenoids, toxemia from infected tonsils, insufficient aeration of the blood from nasal obstruction, bad teeth, etc., were included. He did not mention intestinal toxemia, but I would add that. As far as hygienic causes are concerned, they are very apparent. One is unhygienic surroundings, and others are bad housing, insufficient sunshine, insufficient sleep, improper diet, etc. It was found, on investigating cases, that it was not always a matter of finances. Some families in which the weekly income was higher than in others made a poorer showing than did the latter. It is a matter of proper selection of diet. This is a great subject. It would be a good thing to have a course on it and devote about six evenings to it.

Dr. Howard Terry, Jr., Phoenixville, thanked Dr. Child and Dr. Levy for their papers, and asked Dr. Levy the dose of pituitrin that he employed.

Dr. Dorothy Child, Harrisburg, was glad that the question of weighing has come out so prominently. She did not want members to go away with the idea that scales are no good. They have a good educational advertising value. Mothers will bring babies to be weighed and measured when they would not do so for a medical examination. As a method of advertising for prospective patients (?) weighing cannot be beaten. We need to get away from the idea of a standard weight, like the bed of Procrustes, to which the child must be fitted; but let us remember that weighing has that advertising value for gathering in the mothers that we want to interest, who otherwise might not come.

Dr. Julius Levy, Trenton, N. J., said he had enjoyed very much the discussion by the Professor of Pediatrics of Hahnemann College. It is true that the question of malnutrition is large and extensive. His reference to the scales were mainly on the popular line. He had no quarrel with them as a method of interesting mothers, but pediatrists must quarrel with them on the scientific line, when diagnoses are based on their use. Recently a statement was made that six hundred children were suffering from malnutrition on account of the high cost of living.

He would make clear that he did not use pituitrin. He used the powdered gland of the anterior portion, one or two grains two or three times a day, and has seen no ill effect. He has tried it in epilepsy and other conditions in which it seemed that it might be of value. Of course, this was merely experimental.

THE LABORATORY AS AN AID IN THE DIAGNOSIS OF DISEASES OF CHILDREN.

BY

JOHN G. WURTZ, M.D., PITTSBURGH.

Pathologist to the Pittsburgh Homœopathic Hospital.

(Read before the Homœopathic Medical Society of Pennsylvania, Sept. 16, 1919.)

A COMPLETE history, a careful consideration of subjective and objective symptoms, a thorough physical examination and an intelligent use of the X-ray and clinical laboratories are the requisites for an accurate diagnosis of disease. It is often possible to arrive at a diagnosis with the aid of only one or two of the above; but the accuracy varies in proportion to the number of methods used.

In the practice of pediatrics, particularly in the hospital, a good history is frequently almost impossible, because of the ignorance or lack of observation of the parents or guardians; or to the inability of the physician to converse fluently in foreign tongues. Subjective symptoms are quite often nil, as must be expected in youthful patients. Generally the diagnosis is made on the strength of the objective symptoms and physical findings. Fortunately, good work is done in this way; but better work is possible if the physician seeks the X-ray and clinical laboratory to refute or confirm the diagnosis.

In the exanthemata the objective symptoms are the most important; in diseases of the chest, the physical findings; while in certain infections and infestments the diagnosis rests upon the laboratory findings.

This is a late date to tell of the advantages of the clinical laboratory. Everyone is familiar with them and many use them constantly. However, for those who do not avail themselves of this aid, I propose a brief discussion to try to point out the value of the laboratory in the diagnosis of diseases in children.

At birth the number of red blood corpuscles is usually between six and seven millions. During the first few days of life they diminish in number; but rise again only to gradually decrease and remain fairly constant by the tenth day or so. After the sixth year the number is on an average higher than in babyhood and takes on the adult values. Normoblasts are

found in the peripheral blood during the first few days after birth and are normal at this time. The hemoglobin at birth may be as high as 110 per cent.; but falls to about 70 per cent. and remains this low until about the sixth year, after which it increases. The color index in childhood is proportionately low.

In infants and young children the number of leucocytes is higher than in older children and adults; but by the sixth year the adult number—approximately six thousand—is reached. During the first three or four years of life the percentage of lymphocytes is high. From 40 to 50 per cent. during the first two years, the percentage drops to 30 at about the age of four and remains at this level throughout the remainder of childhood. The polymorphonuclear neutrophiles during this time are proportionately low. Of the other leucocytes, transitional forms, eosinophiles and large mononuclears, little can be said. After the first week they are present in about the same proportions as in adults.

Anemia is a common ailment in childhood and occurs at all ages from a few months upwards. It is easily induced in children and follows secondarily upon poor food, bad hygiene, tuberculosis, syphilis, ileo-colitis, rheumatism or any acute or more or less chronic disease. Anemia being but little more than a symptom will not determine its own cause. That must be found by other means than the mere estimation of red cell numbers and hemoglobin per cent.

While the red cell count and hemoglobin estimation are helpful, more can be learned from a total and differential leucocyte count. A leucocytosis—by which, in this connection, is meant an increase of the polymorphonuclear neutrophiles—is found in infections due to the pneumococcus, streptococcus, staphylococcus and meningococcus. Or, considered from the disease standpoint, pneumonia, purulent pleuritis, purulent pericarditis, endocarditis, tonsilitis, diphtheria, scarlet fever, variola, acute rheumatic fever, acute nephritis, septic peritonitis, pneumococcic and meningococcic meningitis, osteomyelitis and appendicitis. An increase of lymphocytes, or lymphocytosis is met with in acute and chronic lymphatic leukemia, pertussis, rickets, congenital syphilis, measles, typhoid, tuberculosis and relatively in pernicious anemia. The leucocytes are usually found to be normal in influenza, measles, typhoid, mumps and tubercular meningitis.

By comparing these lists it can be readily seen that a leucocyte and differential count alone aid in the differentiation of, for example, scarlet fever from measles; purulent from tubercular meningitis; beginning pneumonia from tubercular meningitis, or typhoid. It differentiates typhoid from appendicitis, from ileocolitis and septicemia. It also distinguishes between septic and tubercular peritonitis, and further, sepsis from malaria.

Eosinophiles, which are normally present in the blood in from 1 to 4 per cent., are found to be increased in infestments with intestinal parasites, in scarlatina, various skin diseases and some cases of tuberculosis.

Of value, too, in children is the estimation of the coagulation time of the blood. Particularly in those children who are about to be operated upon for any reason. While hemophilia is relatively rare, it is always well to be assured that the blood's clotting time is within the normal. Here it may be well to call attention to blood grouping as an absolutely necessary procedure preliminary to blood transfusion.

The Widal reaction is so well known and so frequently used, that to elaborate on it is unnecessary. Blood cultures are of value early in infections due to the typhoid bacillus, pneumococcus or streptococcus. Early in typhoid, pneumonia, endocarditis or any septicemia the causative organisms may be obtained from the blood. Later, after localization, negative results are more frequent. Broadly speaking, it may be said, that should the blood culture be positive late in those diseases which begin with a bacteremia, the prognosis is grave.

A Wassermann reaction of the child at the time of birth, in a suspected syphilitic mother, is of considerable prognostic value. In about 35 per cent. of cases, a child born of a syphilitic mother will yield a positive Wassermann reaction. Those reacting negatively will nearly all, sooner or later, show signs of syphilis. As in the cases of adults, a negative Wassermann in a child does not exclude syphilis; but a positive one means active spirochetes.

Blood from the umbilical cord is poor material for a Wassermann reaction. In my experience the blood will either not clot, or if it does the serum is usually greatly blood stained; or the serum is anticomplementary. Better to take blood directly from the mother and child.

Since the specimen of blood for a Wassermann is, as a

rule, taken by the physician and sent to the laboratory, it may be well to digress from the value of the test to a few hints in taking blood from children. It is my custom, when the anterior fontanel is open, to withdraw blood from the superior longitudinal sinus by means of a syringe. Should the fontanel be closed either the veins of the arm or jugular veins may be used. In the latter case, the child is rigidly held head down. It is unnecessary, of course, to mention the value of asepsis during such operations. After withdrawing the blood, the needle should be removed from the syringe and the blood gently squirted down the side of a test-tube. This technic eliminates foaming which is very undesirable when but a small amount of blood is secured.

Up until about the tenth year of age the von Pirquet reaction is quite useful; but its reliability decreases as age advances. This reaction to determine the presence of active tuberculosis is performed in various ways. Three features characterize the reaction. These begin in from four to six hours after the application of the tuberculin and reach their intensity in about twenty-four hours, though they may not all be present. These features are: A constitutional reaction with fever; a local reaction at the site of inoculation, varying in intensity from a slight redness to a severe inflammation; and a focal reaction about the tuberculous lesion. While the von Pirquet is not strictly speaking a laboratory test, its performance is so frequently requested of the pathologist, that it is here mentioned as a valuable asset in the diagnosis of tuberculosis.

Another test of a similar nature, and also directed by the pathologist, is the Schick test to determine the presence or absence of immunity against diphtheria. It is carried out by the intracutaneous injection of one-fiftieth of the minimum lethal dose—for a two hundred fifty gram guinea pig—of diphtheria toxin. A positive reaction here represents the absence of sufficient antitoxin in the patient's body, and is manifested by an area of inflammation at the seat of inoculation, after twelve to twenty-four hours. A negative reaction reveals no change. This test is of value in diphtheria contacts in order to determine the necessity for antitoxin immunization.

The findings in the urine of children are, like those in adults, of value only when considered with the clinical signs and symptoms. The amount of urine voided, the specific grav-

ity, the tests for albumin, sugar and acetone; along with the microscopic examination of the sediment, are the most valuable. On rare occasions other tests may be called for; but generally speaking, those mentioned above are sufficient. Urinalysis was probably the first of all laboratory procedures and is the most familiar, so its further consideration is unnecessary. It is well to remember, however, that standing alone, urinalysis is perhaps the most valueless of all laboratory examinations. Any form of nephritis or passive congestion may present an albuminuria and cylindruria; acute nephritis, trauma or nephrolithiasis may present a hematuria; an acidosis can exist without an acetonuria; and a glycosuria is often found in other than diabetic conditions.

The examination of exudates and transudates is often of aid in diagnosis. Exudates are of inflammatory origin and present a high specific gravity, high albumin content and high cell count. Transudates give lower values in all three examinations. In exudates the causative micro-organism may be found; while in transudates bacteria are seldom present. The appearance of the exudate is of importance. It may be serous, serofibrinous, seropurulent, purulent and hemorrhagic. These terms need no explanation. The differential cell count is valuable in fluids from the thoracic and peritoneal cavities. A predominance of polymorphonuclear leucocytes points to an acute infectious process; while a predominance of lymphocytes generally signifies tuberculosis. In exudates may be found the organism responsible for the inflammation. One must remember the possibility of a mixed or secondary infection in tubercular pleuritis, in order not to be misled.

The bacteriological examination of discharges from the eye, ear, nose, throat, and genito-urinary tract are of greatest importance. By such examinations can be told the nature of the infection and consequently can be outlined suitable treatment. Smears from conjunctival discharges may show gonococci or pneumococci Koch-Weeks bacilli or those of Morax and Axenfeld. Examinations of nasal discharges either by direct smear or culture, reveal the presence of the diphtheria bacillus; the importance of such a finding is known to everyone. Smears of pharyngeal exudates may reveal the presence of the spirillum of Vincent's angina. Bacteriological examinations of the discharges from the genito-urinary tract are done mostly to determine the presence or absence of gonococci.

Sputum examinations are not frequently made in children because the proper specimen is difficult to secure. However, after the child coughs a sterile cotton swab may be introduced into the pharynx and sufficient sputum obtained before the child swallows. This sputum will reveal all the organisms and cells found in the various respiratory diseases. When the specimen is properly obtained the examination of the sputum is of value.

In suspected meningitis or poliomyelitis a lumbar puncture is of value. The spinal fluid may be clear or present any degree of cloudiness to that of pure pus. In tuberculosis it is not uncommon to find the fluid clear; but upon standing develops a cobweb-like coagulum. Spinal fluid is subjected to various tests, the important ones being bacteriological, chemical and cytological. The bacteriological examination of spinal fluid will reveal the infecting organism. Especially is this true of the meningococcus, pneumococcus, and streptococcus. It is often with difficulty that tubercle bacilli can be demonstrated. The total and differential cell counts are of importance. As in the case of exudates, the polymorphonuclear elements point to acute infections by the pyogenic organisms; while a predominance of lymphocytes points to tuberculosis and syphilis. Traces of globulin are present normally in the spinal fluid; but in acute inflammations and syphilis the amount is increased. If there is no blood mixed with the fluid and evidence of acute inflammation is absent, a positive globulin test is strongly suggestive of syphilis. In fact, it is said to run parallel with the Wassermann reaction with spinal fluid. Normal spinal fluid reduces copper, giving a distinct sugar reaction. No reduction occurs in pyogenic meningitis; and the reduction is but faint in tubercular meningitis. Poliomyelitis give a normal reaction.

In the connection with bacteriological examination of sputum, spinal fluid, exudates and pus from children, must be mentioned as of value, the inoculation of guinea pigs with such fluids, to determine the presence of tubercle bacilli, when the other methods fail.

The examination of the mother's milk is often of value in the case where the breast-fed infant does not thrive. Poor milk can be detected by laboratory procedures and the physician guided accordingly. The most important for all practical purposes, and the most frequent examinations to which

milk is subjected are: The estimations of the specific gravity and percentages of fat, sugar and protein. The salts and sugar in milk may be said to be almost always constant. The fat and protein are variable and in consequence the specific gravity. With normal specific gravity the protein is high when the fat is high, and vice versa. A high specific gravity must be due to either an increase of protein or a decrease of fat, so by the specific gravity and fat estimation the condition of the milk can be learned.

The examination of feces in infants and children is another subject fit for a very lengthy discussion. Time will not allow a detailed consideration, so suffice to say that the diet of the child can be regulated by an examination of the stools. The examination includes a consideration of the physical, chemical, cystological and bacteriological properties. By these examinations can be detected the quality of digestion. The presence of harmful bacteria or parasites can be learned by a microscopical examination, and the existence of catarrhal inflammation by the presence of, for example, pus and blood.

The laboratory is an aid in the diagnosis of diseases in children. The best results will be obtained when the physician co-operates with the laboratory man, particularly as to the obtaining, preserving and forwarding of specimens for examination.

SOCIAL SERVICE: ITS APPLICATION IN INTERNAL MEDICINE.

BY

WM. G. STEELE, M.D., PHILADELPHIA.

Associate Professor of Medicine, Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of Pennsylvania, December 16, 1919.)

We hear so much about social service these days, and it has been introduced in many of our institutions, but when we investigate the work we find through a misunderstanding or the accentuation of one part, that it only represents one side of social service, or, not even a resemblance of social service is seen in the work done in some institutions.

It is because of this lack of knowledge that I shall en-

deavor to present before you what social service work means and its value in treating the sick.

When a patient visits one of our busy clinics the idea which the doctor gets of him is incomplete. What we get from the patient's hospital visit is often but a small patch of his life and illness, caught sight of on the wing as he flashes past us. All that has led up to this point in his life's drama and made it comprehensible, all the rest of its characters, which modify or dominate the one before us, all the later progress of the story which tells us whether our treatment hits the mark or not, are often a blank to the doctor unless he can call upon a social service worker to get the rest of the story for him.

Sometimes the patient who happens to appear at the hospital is himself a minor character in the drama of illness and misery at home. There the social worker's visit may reveal far worse suffering among those who do not come to the hospital at all; for the source of these sufferings is deep in the roots of our civilization and our effort to reach it means an attempt at conserving vitality. Social service work is the effort of some of us to prevent the life being squeezed out of any of us. The rich need social service as much as the poor. We are all more or less choked and twisted by the conflict of our own desires. We all want to make a living, but we also, every one of us, want to make a life. We are squeezed between the pressing need of food, clothing and shelter and the equally pressing need for some enjoyment, some fruition, some accomplishment that will make it worth while to struggle and to wait.

It is because of the pressure of both these needs that our vitality is sapped, or runs out altogether till we break down physically, financially or morally—usually in all three ways at once. The physical, financial or moral breakdown of working girls comes in part from the bad physical and economic conditions of their work, in part also from their own attempt to eat their cake, and have it, too; to get some fun out of life without counting the cost.

The physical or moral breakdown of rich girls results partly from the bad physical and economic conditions of their idleness, partly also from their own pitiful efforts to enjoy life without getting into it or getting caught by it.

It is hopeless to seek any single cause or any single rem-

edy for the disease and misery of the struggling poor or the floundering rich.

Idleness or overwork, bewilderment or loneliness, surfeit or starvation, listlessness or recklessness, all alike drain out our vitality and nourish in us the seeds of disaster.

That disaster may suddenly appear in its extremest form as bankruptcy, fatal disease or suicide. More often we get wind of the danger in its earlier and more curable stages, when it appears as alcoholic habits, constipation, nervous prostration, debility, loss of a job, tuberculosis, gambling, stubbornness, waywardness, and the tendency to steal instead of working.

To break this vicious circle, round which discouragement, inefficiency, poverty, machinations and disease are perpetually chasing each other, one can strike in from any side, but one must always deal with the whole circle before success comes. Doctors and nurses strike in from the side of disease, but the disease for which the sufferer comes to us is often the least important symptom of his trouble. Charities attack from the side of poverty. Churches, schools and recreationists seek to give refreshment, power, courage and a saner outlook. Hospital work then will always be slipshod and slovenly unless it is intimately bound up with such work. For nine-tenths of all diseases are misery diseases bound up in their causes and in their consequences with the misery which social workers are trained to deal with.

Because most hospital work deals with misery diseases we ought to establish beside the doctor, in every department of the hospital, a social worker keen to recognize and to help the social conditions mixed up in almost every case of disease. It is almost useless to establish a social service in hospitals without an expert and conscientious medical staff. Every item of our social work gets its value from the accurate physical diagnosis with which we start or to which we try to contribute and from the rational plan of the treatment in which we are asked to assist. If the medical diagnosis is faulty the social work based on it may do serious harm. In a case in which an educational and stimulating career was planned out for a patient diagnosed as neurasthenic it was later discovered that the poor patient's nervousness had been all along a symptom of an unrecognized phthisis so that the stimulating treatment was all a grievous mistake.

I have asserted that the hospital patient's illness was often merely an incident in his real trouble, his ignorance, recklessness, poverty, discouragement, feeble-mindedness, loneliness. Social service serves the patient in his real trouble, whatever that might be. Now his real trouble is understandable and helpable only when you know:

1 His bodily state (medical diagnosis and especially prognosis).

2 His mental state.

3 His bodily environment (work, wages, food, clothing, housing, etc.).

4 His mental environment, the influence (good or bad) of his family, friends, enemies, neutral companions.

To get Nos. 2, 3 and 4 and contribute them to the doctor's pile so that he can use the information in his treatment and can ask for help when they go beyond his province, is the essence of medical-social work, a sympathetic study of the individual in his home. Incidentally it involves following the course of the patient's disease after he leaves, as well as studying him while he is in the ward or clinic. Social work means service based on a personal or intimate study of an individual and his environment—such as helping a discouraged boy with one leg to hold his job in competition with two-legged boys, winning a mother's confidence so that she is willing to entrust her child to the hospital's care, even for operation, persuading an unmarried mother to keep her baby, training a neurasthenic to side-track his habit pains, making the dyspeptic so keenly aware of our personal interest in him (no fake interest) that he is ready to persevere in treatment and to return for observation, encouraging discouraged men and women to form plans along the most economic lines in running their household and personal affairs.

To put the subject in the most concrete form, I would say, "Social service is the study of character under adversity and of the influences that mold that character for good or ill." The true business of the social service worker is psychical diagnosis and treatment.

SOME SURGICAL LESIONS OF THE WAR.

BY

JOHN DEAN ELLIOTT, M.D., PHILADELPHIA.

Associate Professor of Surgery in Hahnemann Medical College of Philadelphia.

(Read before the Pennsylvania State Homœopathic Medical Society, September 17, 1919.)

VALUABLE advances have been made in surgery during the war, in spite of the oft-quoted statement, "That no new surgical principles have been discovered." This could not have been otherwise when we remember the enormous number of wounded, the severity of their injuries, the congregating of them into great hospitals and centers which allowed careful observations and comparisons of various methods to be made and the great number of experienced surgeons who threw themselves into this work with enthusiasm and devotion, really becoming specialists in this type of injury. The results covered many lines and all parts of the body and I will only take up a few points that impressed themselves in particular upon me.

The basis of operative treatment of all wounds became débridement which was applied to the brain, lungs, joints, bones and soft parts with splendid results. It was a gradual evolution from the early days of the war when the Allies were able to return to duty about 23 per cent. of their wounded, and it was the great factor which raised this percentage to nearly 90 during the last two years of active warfare. There is little that is new in the histology of wound-healing and the lessons we have learned have dealt with the bacteriology of wounds. The anaerobes and their development upon decomposing tissue are fortunately not frequently met in ordinary life, so that gas gangrene is not the great menace that it was in France, but the others, particularly the stereptococci, are familiar to all of us.

During the winter of 1914-15 it was recognized that fragments of high explosive shells almost invariably carried bacteria with them; that the bacteria were not confined to the neighborhood of the foreign bodies, but were deposited along the course it had traveled, and that the tissues along this tract were so severely injured that they would die. The amount of death varied, it might be very slight or whole groups of mus-

cles, or an entire limb, might become gangrenous. The presence of bacteria in such an incubating medium led to very severe infections, often followed by death, destruction of joints and amputations. Examinations disclosed that while bacteria were carried into the wound at the time of its inception, they did not actually invade the tissues until some hours later and if they could be completely removed during this interval the wound would remain sterile. Taking advantage of these facts Lemaitre and others began to lay wounds wide open from beginning to end and to remove all foreign bodies and tissue which appeared to have been devitalized. When this was done during the first few hours there was little pus, no infection and the wounds were in condition to be sutured within several days. With increasing experience the time of closure was shortened and finally the great majority of the wounds of the soft parts were sutured at the time of débridement with healing occurring in two or three weeks.

The technique of the operation is not difficult, but it requires patience, gentleness and attention to details to successfully carry it out. Some of the points to be borne in mind are: The entire extent of the wound should be examined visually so that all infectious material can be removed and the condition of the tissues be determined. All devitalized tissue must be removed, but any that will regenerate should be allowed to remain. At first there is a tendency for too free excision with consequent lessening of function and deformity, but experience will prove what should be taken out and what should be allowed to stay. There is little danger of gangrene in the skin, but the subcutaneous fat breaks down more widely. Fragments and strands of fibrous tissue, which normally had a scanty blood supply, have poor powers of recuperation and their sharp edges are very likely to catch and hold bits of foreign bodies in a penetrating wound. Muscles should be examined as to their color, blood supply and ability to contract. A sufficient blood supply is shown by fine capillary oozing on a freshly cut surface, and this is of much more value than the presence of circulation in large vessels. Contractility can be seen if the fibres are gently pinched for they will react to very slight irritation. The bright red appearance of a freshly cut, healthy muscle turns a dull, bluish red, and this occurs so quickly that, unless débridement is systematically done, there is a temptation to cover the same ground a second time. When

bone has been subjected to infection it should be thoroughly cleansed, particular care being devoted to the rough edges and the medulla. The question of the removal of fragments of a fracture has not been definitely worked out, but the consensus of opinion is to remove only those portions which interfere with reduction or are entirely separated from the periosteum. The broken fragments are of considerable value in the formation of callus and too free removal may lead to non-union. In no portion of the body was the improvement in treatment greater than in wounds of the joints. In the early days the results were disastrous, but later a very bright page in the history of surgery was written in the treatment of these lesions. Synovial fluid has great powers of resistance to bacteria and it may be several days before a contaminated joint is actually infected. During this time the joint should be freely incised, flushed out with saline solution, loose fragments of bone or other foreign bodies removed, the cavity filled with ether, damaged synovial membrane excised and the joint closed. If insufficient membrane for closure remains muscular or fibrous flaps should be used. An open or drained joint will almost invariably lead to suppuration or ankylosis.

After débridement of a wound, the question of future treatment arises and experience and judgment must play a large part in the decision. If it is practically certain that all broken down and infectious tissues have been removed and complete hemostasis has been secured the wound should be completely closed, particular attention being devoted to the obliteration of dead spaces. The success of primary suture in war wounds which are more difficult to cleanse and more subject to virulent infection than those met in civil life was very great. Lemaitre had less than 10 per cent. of failures in wounds of all degrees of the soft parts and Poole reports 93 successes and 6 failures for his team in Evacuation Hospital No. 1, and states that this was approximately the percentage of the other teams. In civilian life especially fruitful fields should be compound fractures and joint injuries.

Contra-indications are: (1) Evidences of infection of the tissues which are apparent at the time of operation. (2) Too great a length of time before treatment. In France a good working rule was that a wound was probably infected after eight or twelve hours, but some of the operators who had had the greatest experience performed primary suture in care-

fully selected cases as late as twenty-four hours after the injury had been received. I believe that we will have more latitude in civil surgery and since returning to Philadelphia I have débrided and closed a compound fracture of the elbow, in a woman 72 years of age, with a perfect result twenty-six hours after it was sustained. Such cases should offer no excuse for procrastination for if bacteria are actually carried into the wound they will develop as rapidly here as they did on the other side. (3) Diminished vitality, especially interference of the blood supply to a part from injury to large vessels, locally or at a distance. (4) When haste is necessary so that a thorough operation can not be performed, for example, as with shock or multiple wounds.

If any doubt about its asepticity remains the wound should be left entirely open. At the first dressing, which should be done under as aseptic conditions as the primary operation, smears and cultures should be made from various areas, and if these remain sterile or delayed, primary suture can then be performed. By delayed primary suture is meant one that can be made by simply approximating the edges and can usually be done up to the sixth day. After that some of the epithelium and perhaps granulation or scar tissue will have to be excised and this is termed secondary suture.

The most dangerous bacteria are the hemolytic streptococci and a wound from which they can be recovered should never be sutured. If they have been present at any time at least two cultures should remain sterile before any attempt at closure is made. The occasional presence of other forms of bacteria, for instance one in three or four fields of a smear, is not a contra-indication to suture.

When infection is present it must be combated with some form of antiseptics, preferably by the Carrel-Dakin method. This method has been the subject of a great deal of criticism and it is difficult to apply properly, but the results have been so good in different hands that its value can hardly be doubted. When infection has been overcome a secondary suture can then be made.

The importance of shock was emphasized by the conditions at the front and it was only by the greatest attention to details that it could be combated. The wounded frequently had to lie out in the cold and wet for several hours before they could be given first aid and after that a trip of a number of miles,

often over badly congested roads, was necessary before they could receive definite treatment. Every effort was made to overcome these difficulties and in the Argonne in over 500 cases treated by my team the average time required to reach the operating table was twenty-three hours. In making up this average we have included those patients who had received a good deal of pre-operative treatment, and also a number of German prisoners whose arrival was often considerably delayed and who were never operated upon until all of the American casualties had been disposed of.

One of our first lessons upon reaching France was the proper way to fold the blankets about the patients. Any one who has slept in the open realizes that it is not the number of blankets used, but the manner in which they are arranged, that gives protection from the cold. I have seen men suffering, who had three or four blankets over them, but none between them and the litter. In the average hospital an orderly will toss a thin blanket or two over a shocked patient when he enters the receiving ward, yet warmth is probably the most necessary and efficient method we have in the treatment of this condition. A warm room, properly arranged blankets, hot drinks and hot water bottles, if used early, will save many patients from a severe or even fatal shock. This may sound like a trite remark, but, in my experience, these self-evident details have not been given the attention they deserve.

Pain, if allowed to continue, will increase primary shock or may produce the condition secondarily. The latter not infrequently occurred during the transportation of patients with fractures, particularly of the femur, who were not suffering from shock when first treated. Properly applied splints were of the greatest value and the revival of the Thomas splint which is easily and quickly applied and immobilizes a limb splendidly, was one of the notable advances in the treatment of fractures and was used from the firing line back to the base. A great deal of time and attention was given to the splint drill and a hospital corps man was not sent to the front until he could apply the common splints easily and gently. A Thomas and a Cabot splint should be in every ambulance which is used in emergency work.

There are a number of theories about the causes and treatment of shock, but certain facts have been established and

accepted by every one. The best gauge of shock is the blood pressure, for a lowered pressure is the most constant feature of this condition, and the longer it is allowed to persist the more difficult does it become to raise it permanently. If warmth is not sufficient to accomplish this the fluids of the body should be increased by saline solution under the skin, per rectum or intravenously. Infusion with saline solution containing 2 to 6 per cent. of gum, to which 2-4 per cent. of bicarbonate of soda may be added to overcome acidosis, or a hypertonic salt solution containing 4 to 6 per cent. of gum acacia has been recommended. I have had no personal experience with these solutions, but a great deal of work has been expended upon them and many men believe that their effects are longer lasting and, therefore, superior to the ordinary normal saline.

Undoubtedly the best treatment for severe shock is transfusion with properly selected blood. Since the introduction of the citrate method the operation is safe and not difficult to perform and the inconvenience to the donor from the loss of blood is slight. At the front where only the severely injured were retained for a few hours it was not always possible to obtain all the blood that was desired. Yet a great many lives were saved by transfusion under these conditions, and I believe that any progressive hospital should be in a position to carry out this procedure, whenever it is necessary. With the return to civil life of so many men who were on shock teams there should be great advances in this form of therapy. The next great step in transfusion may be the perfection of methods of preserving blood and probably in the not distant future the hospital pharmacies will be able to furnish properly selected blood at a moment's notice.

The question of operating during severe shock is a delicate one and requires the nicest judgment. When possible, this condition should be relieved before any but inoperative measures are undertaken. If these are necessary the patient should be infused, or transfused if possible, prior to or during the operation to avoid the fall of blood pressure to a still lower level. The anesthetic of choice in these cases is gas and oxygen in proportions not stronger than 3 to 1.

One of the first impressions that I received upon entering the service was that the army placed less value upon the individual than we had done in civil life and that the relation-

ship between the medical officer and soldier was of a rather impersonal nature whose only object was to return another man to the firing line. At first this appealed to me as cold blooded, but I now feel that there could be no better criterion of success than the knowledge that a man was returning to his duty in first class condition. The government has established great convalescent and reconstruction hospitals to restore our men to health as completely as possible. Corps of trained physicians and personnel are devoting their time to this work and to teaching the men who have been incapacitated from performing their old duties new methods of making a livelihood so that they can again take up the battle of life with a fair chance to win it.

The men who sacrificed themselves in winning the war certainly deserve the gratitude of the nation, and every aid that can be furnished to them, but it is well to bear in mind that the country will be as great a gainer in the long run as are the individuals whom it is helping. From the viewpoint of efficiency it would be of as much value to the State to restore the sick and injured of civil life as those suffering from war wounds, shell shock and other diseases contracted in the service. The social service departments of our hospitals have enabled us to follow up our patients to a large extent and have accomplished a great deal of good, but their capacities are limited at present, and it is only the exception among those patients needing such service as I have mentioned, who can be properly treated. I believe that it would do a great deal of good if each of us would study our own work in this light to find out if our patients were receiving the maximum amount of benefit from their treatment. I can recall many patients whom I have been forced to discharge from the hospital against my wishes, in order to make room for others with more serious conditions, who were not yet able to take up their ordinary duties and who could not receive the proper amount of attention in their own homes. With the example of the government before us we have a splendid opportunity to teach the public the value of the after-treatment of our sick and injured and the necessity of the proper facilities to carry it out.

In closing I would like to state my belief that the results obtained in the treatment of the wounded were due to organization, attention to details and team work. These were successful in military surgery and will accomplish equally good results if carried into our civil practice.

THE USE OF DIGITALIS.

BY

WM. RENDELL WILLIAMS, M.D., PHILADELPHIA.

(Read before the Clinico-Pathologic Society, May 1, 1919.)

To USE a drug intelligently, two essentials are necessary—first, to know when to use it, secondly, to know how to use it. This particularly applies in the case of digitalis.

Frequently it is prescribed where there are no indications for its use, and just as frequently it is used in such a timid or over-rash manner, that the results are either not beneficial, or disastrous.

Let us examine the first essential, and determine if we have definite indications for its use.

The general use of digitalis dates from the publication of "An Account of Fox Glove and Some of its Medicinal Uses, with Practical Remarks on Dropsy and Other Diseases," by William Withering, an English physician, in 1785.

Naturally the drug came into use in the treatment of all manner of dropsies, then, on account of its ability to slow the pulse in certain cases, it was used extensively as a cardiac sedative in all kinds of rapid heart action. Like many other valuable remedies, it has suffered distinctly from over-appreciation.

Later, the pharmacologist, as the result of animal experimentation, endeavored to lay down laws for its use. It was recognized as a heart remedy without clear cut indications. The clinician's uncertain and indifferent results with the drug had led him to consider it a very capricious and even dangerous weapon.

It remained for Sir James Mackenzie, of London, to bring order out of this chaos, and establish digitalis as a remedy without a peer, in the treatment of heart failure, not heart disease.

He clearly demonstrated the futility of hastening therapeutics upon the observed effects of digitalis upon the normal heart. He says: "The striking feature which has appeared as the result of our researches, is the dependence of the reaction of the drug upon the nature of the lesion from which the patient suffers. This is a feature which is beyond the ken

of the experimentalist, for the hearts he works with are normal hearts, and the reaction of diseased hearts is incapable of experimental reproduction."

He concluded, and amply demonstrated, and it is now generally accepted, that the special field of digitalis is in the treatment of heart failure, and particularly when associated with auricular fibrillation. By heart failure we mean the inability of the heart to measure up to the work demanded of it. Heart failure is a term which I think preferable to inefficiency, decompensation, or ruptured compensation. One must make a sharp distinction between heart disease and heart failure. A diseased heart may be perfectly capable of doing its work. Heart failure is purely a functional derangement, and the main objective in therapeutics is to restore normal function. Restoration of structure we must leave to the surgeon, for digitalis will not correct any pathological change in the heart or arteries.

Intelligent therapeusis is always dependent upon a correct diagnosis. The diagnosis of heart failure is a chapter in itself, and too large a subject to go into in this discussion. Suffice it to say that the diagnosis of heart failure, either present or impending, is absolutely essential before digitalis is administered.

Mackenzie took a series of cases of heart failure, just as they entered his wards, and put them on digitalis. He first eliminated the expected benefit from rest in bed, where conditions were not so urgent as to demand active interference, and kept them without heart medication for several days. When improvement ceased, he gave digitalis, and made a critical study of its effects by exact graphic methods. He was enabled to separate out a group of those cases in which the drug gave brilliant results. This group was made up of cases of auricular fibrillation. He found that cases with normal rhythm were decidedly less easily affected and benefitted than were the fibrillators. And, for the benefit of those of us who like to detect the similia similibus curantur in the beneficial action of drugs, he found that in cases of normal rhythm, the drug, if pushed, would occasionally cause auricular fibrillation.

Digitalis is only useful in the arrhythmias when they are associated with heart failure. In auricular fibrillation it does not restore the rhythm to normal. It slows the heart by block-

ing off the excessive contractile impulses coming down from the fibrillating auricles, thus slowing the ventricular rate, and also promotes the efficiency of the ventricular muscle. It cannot be expected to restore the normal rhythm where premature contractions or paroxysmal tachycardia is present. In heart block it is distinctly contra-indicated if the block is partial. In pulsus alternans, which is due to failure of contractility, it may be extremely valuable. In auricular flutter, its careful administration frequently results in a fibrillation, which, upon the withdrawal of the digitalis, may revert to a normal rhythm. In attacks of transient fibrillation, it is well to withhold the drug.

Digitalis is also effective in heart failure with a normal rhythm. However, we do not have in these cases the effect on the pulse rate to guide its administration as in the fibrillators. Here improvement will be indicated by the increased urinary output, the relief of the dyspnoea, and the patient's sense of comfort.

Impending heart failure is another indication for digitalis. Here we have a large field for its intelligent prophylactic use. In pneumonia, for instance, in adults, or the aged, or where the heart is definitely known to have been previously damaged by rheumatism, or any other infection or degeneration, I am convinced that it is wise to carefully digitalize the patient when first seen. In this way we get an anchor to windward which may be of the utmost value in weathering the storm that the heart is subjected to during the late days of the disease or during the crisis. I am confident that many a life has been lost by sudden heart failure during the later stages, that would have been saved by a little anticipation.

I hold no brief for the administration of digitalis in enormous and dangerous doses during the course of pneumonia, as is only too common at present. It has no specific action upon the lung lesion or the systemic infection. Because a little is good, it does not follow that a great deal is better. However, the way digitalis was used in our army camps last year may not be so reckless as it seems on the face of it. Pratt, of Boston, says: "I have given a tincture of digitalis supplied to the army by a leading American pharmaceutical house, in dram doses every three hours for twenty-four hours, to a pneumonia patient, without affecting the pulse or disturbing

the stomach." Of course, no one could do this with a potent drug.

In the same way, in pregnancy, a little intelligent anticipation where the heart is damaged, may go a long way toward preventing serious complications during a protracted and exhausting delivery. The management of heart failure in pregnancy calls for the keenest clinical judgment.

In thyrotoxicosis when a patient is being prepared for operation, either ligation or incision, there is usually sufficient evidence of impaired heart efficiency to warrant thorough digitalization of the patient. Often a case with fibrillation and advanced heart failure can be improved so markedly that an operation on the thyroid may be undertaken without fear of heart complications.

The second essential—the "know how" to use digitalis, is largely a knowledge of dosage. First, let us dispose of some of the fallacies which cling to digitalis therapy. Many of us have been taught that digitalis is a dangerous drug, and such a belief so long current, has led to its timid administration and insufficient dosage in cases which should have shown brilliant results if the drug had been pushed boldly until physiological effects had been obtained. The latter course is quite possible and safe if one familiarizes himself with the danger signals of digitalis.

Digitalis was supposed to be contra-indicated in the presence of aortic regurgitation and high blood pressure. No valve lesion is a contra-indication for the use of digitalis when heart failure is present, and therapeutic doses of digitalis do not influence the blood pressure unfavorably.

Efforts have been made to avoid the nausea and vomiting caused by digitalis. Nausea and vomiting do not occur until the drug has been absorbed, and they represent its toxic action on the brain. While nausea is one of the danger signals in the use of digitalis, it also indicates that one has an active drug, and it is useless to change to some other preparation in the hope of getting a therapeutic effect without these symptoms. The habit of rendering digitalis fat-free has grown from this tendency to avoid these distressing symptoms. As an actual fact, there is so little fat in digitalis, that it is not a factor to be considered.

One may conclude that a preparation of digitalis that does not produce nausea when given in sufficient dosage, is worth-

less. It does not follow, however, that digitalis, to prove effective, must always be pushed to the point of causing dangerous or even distressing symptoms.

This brings us to the consideration of the so-called danger symptoms of digitalis. The drug, when indicated, may be boldly pushed until one of these arises. Frequently it is necessary to develop one or the other before full therapeutic effects are observed.

1. Nausea and vomiting, usually preceded by a period of pronounced aversion to food.

2. Slowing of the apex count to 60 per minute. Only in case of fibrillators, however, as therapeutic doses rarely produce marked slowing of the pulse where the rhythm is regular, unless it is primarily very high.

3. Persistent headaches.

4. Coupled beats, *i. e.*, the occurrence of premature contractions, each regular beat being followed by a premature contraction for definite intervals.

5. Distressing sense of palpitation and throbbing in the arteries in cases of normal rhythm.

Upon the appearance of any one of these signs and symptoms, digitalis should be temporarily withdrawn. I say temporarily, for if the underlying cause is still active and not removable, it is safe to say that the patient will always require some degree of digitalis medication so long as he lives. Usually, however, diuresis has set in, dyspnoea has been relieved, and the patient's comfort has been re-established, before the appearance of these symptoms, and one's natural caution has dictated a decrease in dosage. No doubt there is considerable variation in the personal tolerance of the drug —some individuals showing symptoms much more quickly than others.

If these indications that one is getting the physiological effects of digitalis, are borne in mind, that bugaboo, the "cumulative effect" of digitalis may be disregarded.

The choice of the preparation of digitalis is of some importance. Each internist has his favorite. Personally I think the choice should be between the powdered leaves and the tincture. I prefer to use, and recommend, the latter. A good tincture may be obtained almost anywhere, and I believe it will do all that any other preparation, either proprietary or pharmaceutical, will do. A slight deterioration is of no im-

portance for the dosage is determined largely by the nature of the case, and should be large enough and prolonged enough to get results. One must bear in mind that while the effects may take time to appear, its action begins immediately.

Very few cases are so urgent as to require administration other than by the mouth, and then Strophantin, intravenously, is the choice, but only when the patient has not been taking digitalis previously.

The maximum dose of the tincture is one to two drams daily.

It is well to begin with the maximum daily dose in urgent cases of heart failure, not, as so often is done, begin with small doses and increase when the effects fail to appear. This is a practice to be condemned. It means prolonged and unnecessary suffering for the patient.

After the evidences of heart failure have subsided and the patient is up and about, one must determine the daily dosage which will maintain the patient at his maximum efficiency. This requires nice clinical judgment, the best guide being the apex count. Most patients do best on a daily dosage sufficient to keep the apex count between 70 and 90 per minute when at rest.

Where digitalis is being used to anticipate or prevent heart failure, in such cases as I have cited, five to fifteen minims of the tincture three times daily is my usual dosage.

A word of caution concerning the habit of prescribing digitalis in tincture by the drop method. This may be all right, and convenient for the patient where there is no urgency, or when a chronic fibrillator has determined the exact number of drops from a certain medicine dropper that are necessary to keep him in good condition. The physician should, however, know accurately how many minims the prescribed number of drops represents.

Drops are not minims by any means. According to the dropper and the method of dropping, they usually represent from half to three quarters of a minim. Recently in checking up the dosage that a fibrillator was taking as his daily dosage, I found that forty-eight drops from his dropper represented only twenty minims.

In conclusion, failure to get results in the employment of digitalis is usually due to its use in unsuitable cases, the use

of inefficient preparations, improper methods of administration, and the neglect of other necessary therapeutic measures, such as rest in bed, attention to elimination and provision for sleep, and treatment of the primary cause of the damaged heart, such as syphilis, obesity, or nephritis.

HOOK WORM DISEASE: A METHOD OF TREATMENT.

BY

H. G. CARMALT, M.D., PITTSBURGH, PA.

(Read before the Homœopathic Medical Society of Psnnsylvania, Sept. 16, 1919.)

When a history is taken in an army hospital a man's native State is placed on record. If the home State is one of the Southern States, the patient is considered a hookworm suspect and microscopical examination of the feces is made for the hookworm ova. Some observers say that 60 to 80 per cent. of the people in this Southern group of States are affected. It is known as the "lazy" disease and truly it saps the vitality of the victim and leaves him with little ambition or vigor. The picture of a secondary anemia, languor, nutrition below par, coupled with a Southern residence, is suggestive of hookworm disease. The presence of an eosinophilia in a blood count also suggests hookworm. Because of the prevalence of this disease in the South and of the fact that industrial conditions have brought so many Southerners to other States, the physician should be on guard for hookworm in obscure cases of ill health in those that have had residence in the southland.

The ordinary treatment of hookworm is oil of chenopodium by mouth eight mimims, at hour intervals, followed in one hour by one ounce of castor oil and preceded the previous evening by a liquid supper and an ounce of magnesium sulphate. This course of treatment is twice repeated at two months' intervals, but Lieutenant J. L. Kanton worked out a method by which 80 per cent. of cures, he claimed, resulted from one treatment. The method as demonstrated consists in placing four c.c. of the oil of chenopodium in the duodenum by means of a duodenal tube, followed in fifteen minutes by 1200 c.c. of distilled water which flushes the intestine and washes out

the hookworms within some twenty minutes. The presence of the metal tip of the tube in the duodenum was determined by the X-ray. The oil of chenopodium, being irritant to the stomach, could not be used in such large doses except deposited in the duodenum, which, also, is the favorite site of the hookworm.

The preliminary treatment consists of a liquid supper, with an ounce of magnesium sulphate at bedtime, repeated in the morning if necessary, but no breakfast. This method of introducing the appropriate remedy into the intestines might also be considered in the treatment of other intestinal parasites.

Combined Anesthesia in Genito-Urinary Surgery.—C. N. Combs (*Urol. and Cut. Rev.*, Oct., 1919) states that in genito-urinary surgery, a routine administration of ether, while it is apparently satisfactory during the operation, undoubtedly increases the postoperative mortality and morbidity. The surgeon should consult with the anesthetist in regard to the choice of an anesthetic, and in regard to the preoperative and postoperative care in so far as it concerns dangers incident to narcosis. Many of these genito-urinary operations should be performed under local anesthesia. This does not dispense with the services of the anesthetist, as he can be responsible for the choice of the preliminary hypodermic and should acquaint himself with the personality of the patient. During the operation, he can divert the attention of the patient by suitable conversation; and by noting the facial expression, can warn the surgeon as to additional blocking before more vigorous complaint is registered. It is in prostatectomies that combined anesthesia is pronouncedly successful. We have three planes of anesthesia, which can be adapted to the needs as they arise: First, the local anesthesia for opening and closing the skin; second, the addition of gas to destroy consciousness, for working in areas such as the prostatic region, which are not particularly sensitive, but are distressing to the conscious patient; and third, the further addition of ether, to tide over the extremely painful manipulations or to secure muscular flaccidity in patients obstreperous under gas. When a patient is already under the influence of nitrous-oxide, the addition of the vapor from one-half an ounce of ether will accomplish as much as three or four ounces given alone. High blood-pressure is a contra-indication to deep nitrous oxide anesthesia; and we modify the method so as to start with gas and change to light ether with an occasional whiff of gas when restless. When a gas-oxygen machine is not available, or in a colored patient, ether can be given in a way that will eliminate many of its disadvantages. In giving morphine, one should remember that active men require more than women, and old men less. Alcoholics and excessive tobacco users sometimes require scopolamine in addition to the morphine. The author concludes his paper by giving a number of special points that will improve the work of the anesthetist.

EDITORIAL

PROPAGANDA.

"Let your light so shine before men that they may see your good works and glorify your Father who is in Heaven." —St. Matthew, v. 16.

Paraphrasing this quotation from Matthew, we may say "Let the work of the homœopathic physician be so good in every branch of the medical sciences that the public can appreciate his good work, and thus glorify the school of medicine to which he belongs."

Any propaganda not based upon the above principle is a delusion and is unlikely to be productive of any lasting benefit.

No lesson should be taken more seriously to heart than the above in these days of pharisaical glorification. The self satisfied declaration that homœopathy is the thing, without practical demonstration of its value, counts for nothing. Reiteration of faith is not proof. Faith is a good thing; indeed it is indispensable; but faith without works is as nothing. To be thankful that we are not as other men does no good to any one excepting the possessor of that particular pharisaical mental state. He appears to be happy; and the same may be said of the victims of the delusions of grandeur in paresis.

Our quotation from Holy Writ should be accepted as the fundamental principle of propagandism; indeed it is the alpha and omega of the subject. Apparently appealing to the ego, it really makes the strongest possible plea for the highest grade of human efficiency. It lays stress upon the character of work performed by the individual, thereby increasing respect of others for the organization of which he is a member. No organization can be stronger than the sum of the units of which it is composed. All units are weakened if the guiding hand is deficient in any respect.

We are forced to call attention to the above facts, because of widespread talk concerning propagandism among the members of our school, many of whom appear to be utterly oblivious of what such a movement should consist.

The matter was discussed privately among a group of physicians, and much that was wise was said. Several years ago, the Institute published, under the direction of Dr. W. A. Dewey, a small book giving illustrations and details of the homœopathic hospitals and sanitariums of the United States. It was generally voted that that book was a good thing for the school. Indeed, it is to be accepted as the initial step.

The next one will be the publication of the character of work performed by these many hospitals, first giving in careful details their executive and scientific methods, and finally the result of treatment of patients confided to them. This work should not be left to the office clerk, who reports roughly so many of certain diseases with so many recoveries. That sort of thing was all right a few decades ago, but now the public must be shown. The question is how; and our answer is, "By the writings of the hospital staff."

Before a hospital staff can undertake clinical research work, it must have a collection of case histories carefully prepared and classified in a room set aside for the purpose, and so arranged that any particular class of records can be collected for analytical study at a few moments notice. In our September number we indicated what these records should be when we published the schema in use at Hahnemann Hospital of Philadelphia. Several high class institutions recognize the practical value of this subject by publishing in their annual reports the list of writings by the staff during the preceding year. It is a matter of common observation that certain men are as regularly industrious in this respect, as others are conspicuous for their neglect. The staff doctor who cannot make a contribution to medical literature at least once a year limits his value to his hospital. If he says that he has observed nothing worthy of record in literature, we may reply that he did not observe correctly. He confesses that he does not know a good thing when he sees it.

Let us go over Dr. Dewey's book, and ask of each hospital, "Has your staff done its duty?" and "If not, why not?"

Let those especially interested in materia medica adapt the study of drug action to modern requirements and show the folly of the self-satisfied mortal who loudly proclaims that he does not believe in medicines, and who when he is sick rushes to the best prescriber within his knowledge for relief or cure.

Let us consider our surgeons, pathologists, and others as part of ourselves or our organization whose good work adds to the brilliancy of our therapeutists. It must be remembered that such men have been very important factors in building up our institutions. He is foolish who sneers at a pathologist because he is not a materia medicist, or at a surgeon because he chooses to cure with the knife rather than by the aid of drugs. Every man to his calling; and every man faithful to the particular place he is to fill in this life.

It was officially recommended at Asbury Park that hospitals publish small monthly magazines devoted to the institutional interests. The idea conveyed by those who had the matter in mind was not so much mere publicity or exploitation by printers' ink and paper, but rather the education of the public to a knowledge of the character of the work performed by the several hospitals. Such hospital journals should be devoted to the hospital welfare. The industry and good judgment of the editors will play an important part as to the character of reading matter furnished.

Really we can say much more; but why should we, when the text which we have chosen as a heading, tells everything within a few lines. It is one of those literary gems which two thousand years have not succeeded in improving.

HOSPITAL CLASSIFICATION AND INTERNE EDUCATION.

Various classifications of all the Medical Colleges and the Hospitals in the United States have been suggested from time to time but no national standard of Hospitals has as yet been formulated. It is very likely that the Federation of State Examining Boards will undertake and in a few years complete such a classification acceptable throughout the country. The classification made by the American Medical Association is not accepted as final. Meanwhile, the Pennsylvania Bureau of Medical Education and Licensure values its own rating, believing that the standards so set have been superior in results, as shown by the stimulation to efficiency in the hospitals. Other States view with respect and some of them with envy the conditions under which interne service is rendered in Pennsylvania Hospitals. On inspecting hos-

pitals in other States, the Pennsylvania Bureau was convinced of the wisdom of their recommendation to graduates that they take their interne service in accredited Pennsylvania hospitals.

Frequent reinspections of the hospitals have been necessary and have entailed continuous labor on the Bureau but the results have been gratifying. The improvement in equipment and service in the Pathological and X-Ray Laboratories has been remarkable. The Record System as recommended by the Bureau is in general use throughout the State and in all accredited hospitals is installed in its entirety and every part of it used continually.

For the fullest benefit to accrue to internes, it is essential that the teaching qualities of the Hospital Staffs shall be high, and that they *must teach;* many members of staffs are fully qualified to teach but through stress of busy professional work or for other reasons, they fail to give to their internes the watchful assistance and instruction that will be of benefit to the young physicians and which they have a right to receive from the hospital. Other staff members are high grade medical men but lack teaching ability. Satisfactory clinical training is the essential aim of interne education.

Interne credit is given to hospitals not as a favor to the hospital but for the further study of the interne, in fact a fifth year. In 1914, when an amendment to the Medical Practice Act came in force in Pennsylvania, it may have rendered a seeming hardship to graduates to take another unexpected year of study in a hospital before being licensed to practice medicine. Still at that time many were already taking such an extra year by choice and now they would not forego it and indeed value it highly. This was shown by men returning from the Army rather rusty from miscellaneous and indifferent medical service who were anxious to go back for more interne service.

The Pennsylvania Bureau of Medical Education and Licensure feels that it has now reached such a point in the development of interne service that the Bureau shall demand the best possible service for internes that can be given by hospitals. The War is over and a plentiful supply of competent laboratory men and of technicians is obtainable and no further excuse will be allowed for indifferent attention of the members of the staffs on the plea of being overworked. There is an adequate number of hospitals willing to give ex-

cellent interne service and there is no reason why the remainder should not come up to the same high standard of efficiency or be removed from the list of accredited hospitals. It is up to the staffs, and to the formation and work of the same and any derelictions on their part individually or collectively must eventually react on the classification of their hospital.

Sometimes such deficiencies occur in only one or several departments and it is the purpose of the Bureau to stimulate all hospitals to such a diversified service and by frequent re-inspection to be assured that the internes do get proper instruction, or, failing this, to reclassify such hospital or even to drop it from the list entirely.

Leniency in grading was wisely exercised at former classifications in the past, but is not warranted now.

There are many types of hospitals. Those who offer the best interne service are the hospitals in which there is a general mixture of the class of cases admitted, including surgery, medicine, obstetrics, and the surgical and medical specialties. Naturally, in such a hospital the laboratory work will be diversified in nature. In such hospitals surgical cases predominate of course but only to a slight degree. These hospitals have a general fixed staff, each department being headed by specialists in that line who are fully qualified to impart instruction to the internes, and who are willing to be responsible for the education of the interne and who will give the necessary time and effort to do this.

Then there are the hospitals in which, while having a mixed staff, the amount of surgical work done predominates to the point of a very high percentage and naturally the laboratory work will be along limited lines.

The so-called one-man hospitals are those in which the superintendent is a medical man, always a surgeon. He has a few assistants but the responsibility devolves entirely on himself. In these hospitals the work is largely surgical, the admission of other cases being discouraged, and here again the laboratory work is limited in its nature.

There are many special hospitals limited entirely to certain types of ailments, such as, insanity, cancer, children.

There are also many, usually smaller, hospitals with scanty staffs, in which any medical man in the community is permitted to treat his cases.

It can be readily seen that the possible benefit to internes

varies considerably with the type of hospital in which he gets his service.

Recently several articles have appeared in Medical Journals in reference to the Interne Year for Medical Students. Some are advocating that Medical Colleges shall make the Interne Year a fifth college year as a requirement before issuing a medical diploma; nine colleges have already done this. It is suggested that a medical college can be the best judge of the value of such service as they know the clinical needs of the student. This would give medical colleges a sort of supervisory capacity over certain hospitals which seems undesirable.

Eleven States are now requiring a year of interne training before medical licenses are issued by their State Boards. Perhaps 75 per cent. to 90 per cent. of all medical graduates take an interne year now, even in States where it is not required, so it can not be a hardship to many were this required in every State.

It is a source of considerable gratification to the Pennsylvania Bureau of Medical Education and Licensure that the value of interne service is now generally recognized, as Pennsylvania was the pioneer in activity of this line and has developed an interne service, the value of which is recognized by all observers.

Formerly there were more graduates than places in properly equipped hospitals for internes. Now there are fewer graduates and more hospitals of the better grade and there is more chance for choice of hospitals and further improvement of interne service.

Interne service has worked to the benefit of the hospitals as well as for the training of the students; it has improved the type of work of hospitals and their staffs; it has improved the laboratory equipment and laboratory service and it has improved the records to such an extent that in very many hospitals to-day the records are of definite value for research work; and it must result in better treatment of the patients.

Wm. M. Hillegas, M.D.

INTESTINAL TOXEMIA.

The earlier efforts to control the bacteria in the intestinal tract by means of purgation and intestinal antiseptics proved both ineffectual and injurious. It was soon demonstrated that

the doses of the various bactericidal drugs which could be ingested by the patient were far from sufficient to influence the intestinal flora. The drug treatment, therefore of "auto-intoxication," typhoid fever and infectious diarrhoea has consequently fallen into disrepute.

A closer study of the subject in recent years has, however, thrown new light upon the management of bacteriologic disturbances in the intestinal tract and we have learned that by means of the diet decided changes in the character of the bacteria can be produced.

Some years ago Kendall demonstrated the fact that the colon bacillus was a facultative putrefactive or fermentative organism, depending upon whether it was grown in a protein or carbohydrate medium. Torrey pointed out the damaging effects of a high proteolytic flora in the intestinal tract of typhoid fever patients and instituted his high carbohydrate feeding of these cases with good success. Clinical experience has demonstrated the fact, which has also been proven by laboratory methods, that diet is more effective in displacing proteolytic organisms with fermentative organisms in the intestines than is the practice of feeding bulgarian bacilli or the bacillus acidophilus.

Porter, Morris and Meyer (*Amer. Jour. Dis. of Children*, Oct., '19) have made a careful clinical and bacteriological study of the effect of a predominatingly putrefactive intestinal flora upon the nutrition of young children and have developed a technique for the study of the stools which should prove clinically valuable and practical. They have come to the conclusion that in children who suffer from certain types of intoxication and malnutrition the intestinal flora departs in a uniform manner from the normal, and that this departure is in the direction of the establishment of a predominatingly putrefactive type. They recommend the feeding of lactose and the dextrins which were found most effective in bringing about a change from putrefaction to fermentation in the gut.

C. S. R.

REGISTERED CATTLE AND REGISTERED BABIES.

Last month we called attention editorially to the relative importance given by the thoughtless, to human life and death and the health of domestic animals. We are pleased to note

that the United States Public Health Service is doing its utmost to arouse in the public mind a proper perspective of the situation. We have before us a circular entitled "Registered Cattle and Registered Babies". This circular reads as follows:

Horses and cattle breeders owning "blooded" stock do not fail to have their animals "registered". It adds to their value and is therefore justly regarded as highly desirable.

Contrasting this attitude with that of many careless parents, the Public Health Service gives the following reasons why Baby's birth should be registered.

1. To establish identity. 2. To prove nationality. 3. To prove legitimacy. 4. To show when the child has the right to enter school. 5. To show when the child has the right to seek employment under the child labor law. 6. To establish the right of inheritance to property. 7. To establish liability to military duty, as well as exemption therefrom. 8. To establish the right to vote. 9. To qualify to hold title to, and to buy or sell real estate. 10. To establish the right to hold public office. 11. To prove the age at which the marriage contract may be entered into. 12. To make possible statistical studies of health conditions.

THE MEMORIAL.

Headlines in the newspapers announce (whether true or not we cannot say) that the Red Cross has requested the charitable to found hospitals as memorials. Now we have always felt that the charitable rich should receive some instruction concerning the founding of memorials, for in the majority of instances, their charitable ambitions are not realized, and this because they do not understand the "business" in which they invest their money.

No one will contradict us when we say that the present is a time of big things, and that it is likely, despite the present era of unrest and worse, that the future has bigger things in store. A hospital or charitable institution founded on estimates made at the present day will be inadequate for the posterity of fifty years from now. It is even conceivable that an endowment of one million dollars which to-day looks large, may under circumstances of remarkable development

in an institution and its tributary community become insignificantly small.

Let us instance a case: A charitable man had $50,000 which he desired to invest as a memorial to a deceased member of his family. This money was the limit of his ability to give. He wished to found a special institution or hospital named after his family. He was advised against it by a friend, but chose to disregard the advice, and the hospital was built. Sufficient time has now elapsed to determine the unwisdom of the founder and the wastage of benevolence resulting from his decision. The hospital has been kept in existence it is true, but only by the founder working diligently for additional funds. The result has amply shown that any benevolent purpose designed to memorialize any individual purpose cannot be perpetuated unless the endowment is sufficient to make the new institution independent of all other people; for after all the charitably inclined are not at all likely to give their money to the memorials of persons in whom they have little or no interest. Sums mounting into the millions are perfectly capable of taking care of such special memorials without outside help, but it falls to the lot of very few men to be able to bequeath such large amounts.

A certain gentleman a number of years ago announced his intention to devote his entire residuary estate, which was a large one, to founding a pay hospital for contagious diseases in a certain large city. It was explained to him that while such an institution at that time would be a real charity for the well-to-do, and would be self-supporting, nevertheless, it was likely that within fifty years, the march of medical science would succeed in driving all infectious and contagious diseases from our midst. Then his memorial must fall from lack of support, or be devoted to some other purpose. He saw the wisdom of the advice given him.

The creation of "destructive" as opposed to "constructive" conditions in a gift are always obstacles to trustees. Thirty years ago, an institution received an endowment conditional upon the exclusion of homœopaths from its wards. It is alleged to-day that some of the staff would like to break that provision.

About the same time another excellent institution received some endowments conditional upon the exclusion of clinical teaching from within its walls. At that time the teaching

hospital was in disfavor; to-day, the teaching hospital gives the best medical and surgical service.

Much better indeed is the memorial that is bound to endure, namely the endowment. The average man can do but little more than this; and if he but places his endowment in the hands of suitable trustees, its perpetuity must endure for all time so far as human foresight can judge. Even the endowment proposition has its uncertainties. Fifty years ago, five thousand dollars was supposed to create a free bed in perpetuity. To-day, the high cost of labor and materials and the increased expense of medical and surgical supplies, make $15,000 nearer the correct figure. It is said of one certain highly respected hospital that it has more $5,000 endowments than it has beds, and yet it has great difficulties despite its prestige in meeting expenses.

The small inadequately endowed and equipped hospital is useless excepting as an accident station in its community, and is a constant source of trouble and anxiety.

LAW, MEDICINE AND BOLSHEVISM.

Last month we wrote of some matters pertaining to physicians' bills in estate audits. This has caused to be brought to our attention an incident of recent occurrence. In the case of a certain estate, the physician's bill amounted to a remuneration at the rate of approximately nine dollars per hour. The active executor, a lawyer, thought this too big, and by strenuous efforts, induced the doctor to settle at $8.73 per hour, *i. e.*, approximately so. Now as part of the affairs of that estate it was necessary to have a master to pass on a legal formality, which occupied, so our informant avers, about one hour; for which again we quote our informant, a charge of approximately $800 per hour was made; but our informant was generous, and was willing to admit that there might have been another hour concealed somewhere, *e. g.*, in coming and going from the office, going back to the office for his tools *a la* plumber, etc., and thus we might bring the charge down to $400.00 per hour; but let us be generous, and cut this in half, and say that said master only charged $200.00 per hour,

and that our informant did not know what he was talking about.

Physicians have been accused of mulcting estates. Our comments are unnecessary. Every one of our readers is thinking exactly as we are thinking.

If any doctor ever charged $200 per hour for routine medical services we have yet to make his acquaintance.

If Courts approve of such things, then let us all turn, not Bolshevists but Lawyers and get out of the world all that is coming to us.

THE DOCTOR'S DESK AND ITS DISORDER.

THE disorder as to papers of the desk of the average physician is proverbial and has been the cause of many a domestic heartache. That each of the defendants in these domestic troubles is not the worst man in the world is attested by the following story (duly vouched for) concerning a good old Philadelphia doctor: His desk became so overladen with papers that they are alleged to have stuck out over the edge for an inch or so. Finally there was just enough bare space in front to permit the doctor to write a postal card or a prescription. Unable longer to tolerate the disorder, the Doctor had the desk and its contents carried into a corner of the office, and then he bought a new desk.

THE MEDICAL SOCIETY SECRETARY.

WHEN you get a good secretary for your medical society take care of him. Lighten his labors as far as you individually can do so. Answer all his communications promptly. Do not excuse yourself on the ground that you did not have the time or that you were too busy. Such an excuse is rather a fling at him, as it implies that he had the time on his hands to write you and should envy your large practice which prevented you from being polite to him, a mere worm working in your interest. Besides you are telling him that he cannot be a very busy man or he would not be a secretary. When he asks you to read a paper remember please that he pays you a compliment, which may not be deserved; nevertheless it is a compliment, which

says plainly that there is at least one man in this world who feels that you have something to say worth listening to. There may be others, but he is the only one you have the goods on. Therefore cherish him. If you do your duty and write that paper do not put him to extra trouble by failure to affix a title to the paper with your name as author. Otherwise he may, if he happens to be an eye specialist, not knowing any better, list your production in the wrong bureau; or worse yet he may give the credit of authorship to the wrong man, possibly to one of the surgeons. In revenge, the surgeon may cut him. Help him with his printed programme by sending in your reports early. Remember that medical secretaries are human. They may want to go off and get married, just like other men and women, and we should not harry them on their honeymoons by forcing them to look after said programme. When you write to them, please write legibly so that they can decide quickly whether you are sending a letter, a check for back dues, or something else. When you prepare your manuscript, just prepare it as you would like to see it in print if the other fellow had written it. Do not make each paragraph have a different kind of indentation, and do not just for the sake of making your manuscript look pretty or for sake of variety enclose an occasional one in a ruled square, set mathematically in the middle of the page. And again, just because paper is expensive do not typewrite with single spacing. Secretaries do not appreciate it. They do not know the cost of paper because the society pays for such as they use. And if you do use single spacing do not add to the indignity by folding your copy over and over to give it a poor imitation of a paper wad, or a seat cushion. Secretaries of medical societies have been the same kind for half a century or more. All of them good and unselfish. Human nature among the members has likewise continued unchanged.

GLEANINGS

GENERAL MEDICINE

Conducted by Clarence Bartlett, M. D.

The Complete Control of Epileptic Seizures by the Administration of Luminal.—Dercum claims magnificent results in the treatment of idiopathic epilepsy by the administration of one and a half grain doses of luminal at bedtime. He has had numerous cases in which the attacks have remained away for years under this treatment. Ordinarily the beneficent effects of the drug are promptly secured; but in some cases, two or three weeks may be required. Sometimes good results are secured more promptly if the luminal is administered at first in conjunction with small doses of potassium bromide. As to diet he has observed care that the red meats and carbohydrates are controlled. Attention is paid also to the emunctories.

Luminal is also efficacious in other than the idiopathic epilepsies. even in those of organic and focal origin. The author says nothing concerning the results in *petit mal.—Therapeutic Gazette*, September 15, 1919.

Therapeutic Application of the Alteration of Brain Volume by the Intravenous Injection of Glucose.—Experiments made by McKibben and Weed have shown that the bulk of the brain may be controlled by a change in the concentration of certain elements in the blood stream. The intravenous injections of hypertonic solutions of certain electrolytes and crystalloids cause a transient rise in the pressure of the spinal fluid, followed by a marked and persistent fall. On the other hand the use of hypotonic solutions of the same substance cause a persistent rise in the intraspinal pressure.

The intravenous injection of glucose has been recommended by Litchfield to combat dehydration, to supply energy, and spare nitrogen. Haden now suggests that the relief obtained by Litchfield was due to relief of cerebral-oedema, and to the consequent decreased intracranial pressure brought about by the hypertonic intravenous injections of glucose.

Haden has employed a solution of 25% glucose. The solution should be made up in freshly distilled water, and autoclaved or boiled. It is not necessary that a fresh solution be made up each time it is given. A stock solution will keep a considerable time. The injection should be made slowly so that one hour is consumed in administering 250 c.c. of a 25% solution.

Haden then proceeds to report two cases, one of meningitis and one of pneumonia with pronounced delirium following measles, in both of which the glucose intravenously brought quick relief of the cerebral phenomena recovery ensuing ultimately.—*Journal of the American Medical Association* September 27, 1919.

[I have been using 5% glucose solutions per rectum in various infections for a couple of years past, and have become thoroughly satisfied as to their value. I have followed the Murphy drop technique. Lately it has seemed that I was getting better results with a stronger solution (10%). Under the treatment, stuporous conditions have cleared up markedly and rapidly. I would commend the strong solutions advocated by Haden, especially as the system is not overburdened with water, which by some physicians is

regarded as prejudicial to an impaired circulatory function. The Murphy drop method enables one to get large quantities of glucose in the course of the 24 hours. As this substance is an excellent diuretic under certain circumstances, it must have a good influence as an eliminant of toxins.—C. B.]

Meningococcic Arthritis.—From a study of 321 cases of meningococcic infection at Camp Jackson, N. C., Herrick and Parkhurst have described three types of arthritis observed to occur in conjunction with meningococcic infection. They have designated these as types A, B, and C. Type A is an acute polyarthritis, occurring frequently as the initial symptom, even in advance of signs of meningeal involvement. It seldom appears after the third day. It is a feature of severe infection, and is a harbinger of a stormy course. Many of the cases have profuse hæmorrhagic rashes coincident with the arthritis. In many instances, both rash and arthritis are transitory. The authors opine that the early joint symptoms are due to hæmorrhage into the articular and periarticular structures. Clinically, the joint condition simulates acute rheumatic arthritis. The involvement is symmetrical. Pain on motion is great, as is tenderness. Effusion is slight or absent. The other complications of meningitis are frequent and serious. The mortality is high, *i. e.*, 33⅓ per cent.

Type B appears about the fifth day. As a rule only one joint is affected; generally the knee. Effusion is a prominent feature. Swelling is great, but redness, pain, tenderness and limitation of motion are surprisingly slight. In no other acute arthritis is there this striking disproportion between swelling and the other inflammatory signs. The exudate is usually viscid, mucinous, semipurulent, not infrequently hæmorrhagic, containing pus cells. Rarely is there thick greenish pus. Systemic disturbance is commonly present. The prognosis is good.

Type C is purely a serum arthritis, and not specific to the meningococcic infection.—*American Journal of the Medical Sciences*, October, 1919.

Ascending Renal Tuberculosis.—While Buerger admits that renal tuberculosis ascending from the bladder is rare, nevertheless there is clinical and pathological proof that in not a few instances the primary lesion in renal and ureteral tuberculosis is in the bladder. Minimal tuberculous lesions of the kidneys when associated with extensive vesical and ureteral changes are doubtless in some cases later involvements of the urinary tract, be they produced in the true ascending canalisular sense of propagation by continuity, or in a more circuitous fashion by late embolic invasion of the kidney; and by the results of the removal of the kidney in two cases, have given ample evidence of the value of nephrectomy even in this type of urinary tuberculosis. Although the renal parenchyma is practically uninvolved in some of these cases, the retention of tuberculous urine in the pelvis of the kidney and the constant contamination of the bladder with tuberculous products elaborated in the ureter are sufficient active factors interfering with recovery.—*American Journal of the Medical Sciences*, October, 1919.

Transitional Leucocytosis as a Sign of Chronic Appendicitis.—Friedman's conclusions based upon the careful study of 65 cases are as follows: 1. Transitional leucocytosis or an increase in large mononuclears and in transitional leucocytes, or an increase in either of them, was found in the blood of 87% of patients in whom evidence of chronic appendicitis was obtained. 2. There was no transitional leucocytosis in the blood of patients in

whom evidence of chronic peptic ulcer was obtained or in the blood of those in whom cholecystitis, renal stones, or other organic abdominal conditions were found at operation. 3. A transitional leucocytosis was found in patients in whom appendicitis was present with other organic abdominal conditions. 4. A hyperleucocytosis and a polynuclear leucocytosis are not so frequently found in chronic appendicitis as a transitional leucocytosis. 5. A transitional leucocytosis as a diagnostic aid is superior to such roentgen signs which are supposed directly or indirectly to point to a diseased appendix. 6. Transitional leucocytosis often persists in the blood after an appendectomy has been performed.—*American Journal of the Medical Sciences*, October, 1919.

PEDIATRICS

Conducted by C. Sigmund Raue, M.D.

Study in a Foundling Institution to Determine the Incidence of Congenital Syphilis.—DeBuys and Loeber (*Jour. of the Amer. Med. Asso.*, Oct. 4, 1919) examined all the infants and children in a foundling institution in an effort to determine the incidence of congenital syphilis. Their bloods were examined by means of the Wassermann reaction; luetin skin tests were made on them; and they were subjected to complete physical examinations, careful observations being made with regard to the growth and development and the usual symptoms attributable to congenital syphilis. The bloods were obtained from the infants with open anterior fontanels from the longitudinal sinus and, in those whose fontanels were closed, from the vein at the bend of the elbow, and in a few instances from the vein over the inner malleolus. The bloods were collected in accordance with the usual method and transmitted to the laboratory for examination.

The authors sum up their observations with the following conclusions:

1. The Wassermann reactions and luetin tests were shown to have been performed accurately, as was proved by the controls made.

2. The negative Wassermann reactions in every case investigated may be explained by the intensity of the treatment to which each child had been subjected, or it may be that the bloods had not yet become positive.

3. The luetin test in this series proved of greater value as a diagnostic measure than the Wassermann reaction in detecting cases of congenital syphilis, and the clinical findings were of greatest value at that time when the value of the luetin was at its minimum; namely, in the first few weeks.

4. The effect of the iodids on the luetin reaction was again shown in this study. The lesion is characteristic and cannot be confounded with the normal positive luetin reaction.

5. Because of the ages of those examined and the character of the institution, this investigation afforded an excellent opportunity to study the various available means of detecting the existence of congenital syphilis. Seventy-four and six-tenths per cent. were infants up to the age of 2 years, of whom 41.6 per cent. were under 1 year of age.

6. Congenital syphilis was found to be relatively more frequent in the illegitimate than in the legitimate children.

7. Of course, this series does not constitute a fair criterion for a comparison of the Wassermann and luetin reactions. It does, however, afford a good idea of their relative values in connection with congenital syphilis at this time of life. It must be remembered that the mortality from con-

genital syphilis is very great, and that those cases in which the earliest ravages of the disease are escaped are those of less severe infection, or are those in which the patient has been partially or thoroughly treated. This study, therefore, we believe to be a fair test of the relative merits of the two reactions under these circumstances.

8. The existence of skin eruptions of syphilitic origin in cases in which both Wassermann and luetin reactions were negative is of decided interest, and further emphasizes the necessity of employing all available means, including complete physical examination and laboratory tests, before deciding a case to be syphilitic or nonsyphilitic.

9. The skin eruptions were more frequent the younger the subject. This was especially true of the syphilitic skin eruptions; twelve of the total of twenty-two instances of it were found within the first three months of life. Ten cases of positive syphilitic skin eruptions were detected at this time in which the luetin reaction had been negative. The syphilitic skin eruptions seemed to be of greatest diagnostic value at that time when the negative laboratory tests are most likely.

10. With very few exceptions, all of the inmates of the institution were below the normal averages in weight, height, development and nutrition. This is of interest in view of the constitutional background of the inmates.

11. Enlarged livers, spleens and glands appeared to be the most constant of the clinical evidences of congenital syphilis.

12. The infrequency of the other clinical manifestations of congenital syphilis in this study, such as snuffles, fissures, wig, and scaling palms and soles, may have been influenced by the system of routine treatment in vogue in the institution as the cases were not followed by us from birth.

13. The incidence of congenital syphilis in this institution, as revealed by the study, was 83.96 per cent. Seventy-nine cases, or 74.53 per cent., were shown by means of the luetin reaction and ten cases, or 9.43 per cent., were shown by the clinical findings, revealing syphilitic skin eruptions. Many of the other cases classified as doubtful or negative had certain of the clinical symptoms of congenital syphilis, but not sufficient to warrant a positive diagnosis.

Some Points Relative to the Technique of Lumbar Puncture in Children.—The technique of performing lumbar puncture in children is discussed in minute detail by Joseph C. Regan (*Archives of Pediatrics*, March, 1919) and presented in a most logical and practical manner by the author. Regan points out that lumbar puncture is in reality a simple procedure when carried out *lege artis*, yet many practitioners hesitate to perform the operation for fear of an unsuccessful result, or "dry-tap." This hesitancy often is unfortunate, preventing the early diagnosis and delaying the early institution of proper therapeutic measures.

In early childhood the interspinous spaces are quite wide while the laminæ are rather short and wide and the interlamellar spaces are directed rather obliquely downwards thus making the lateral route for puncture more difficult while the median route is relatively more easy than in the adult. The termination of the spinal cord is lower as a rule in infancy than in the adult.

The best route for puncture, therefore, is through the median line and in the fourth lumbar interspace; exceptionally it may be necessary to go through the third space but it is never advisable to go higher than this point.

The needle should be introduced directly forward and perpendicular to the spine. Slight upward inclination of the needle may at times become necessary but this is rarely the case.

Position. Lumbar puncture may be performed with the patient lying on the edge of the bed, providing the mattress does not sag; the best place is upon a table when the same is procurable. The sitting position is not suitable for children. The left lateral position is the one of choice because in this position the thumb can be used as a guide for the needle. The patient should therefore lie on the left side with the legs drawn up and the neck and shoulders flexed as far as possible.

Anesthesia. The writer has rarely found it necessary to employ an anesthetic. Neal and DuBois consider a general anesthetic dangerous. When the needle is skilfully introduced the pain is slight and transient. Local anesthesia offers no advantages and should not be employed.

Surgical asepsis is imperative. The instruments must be boiled and the site of the puncture should be prepared by scrubbing the skin with green soap and water, rinsing with alcohol and then painting with tincture of iodine.

Method of holding and introducing the needle. The needle is best held with its base against the palm of the hand and the point between the thumb, index and middle fingers. The thumb of the left hand is pressed firmly into the interspinous space so as to be just below the spine of the fourth lumbar vertebra, the finger-nail making a deep indenture just beneath the spine and the needle is then introduced alongside of and below the thumb.

Results of the tap. If the tap is successful, cerebrospinal fluid flows from the canula as soon as the stilet is removed. Blood may contaminate the fluid as a result of injury to an epidural vein. A dry-tap usually indicates that the needle has not penetrated the subeural space. The needle may, however, become occluded by a blood clot or by fibrinous exudate present in the spinal fluid. The dura may be pushed before the needle or the needle may penetrate the posterior layer of the dura.

The quantity of fluid withdrawn. For diagnostic purposes five to eight mils of fluid is sufficient. For therapeutic purposes from twenty to thirty mils may be withdrawn. If the fluid is under high pressure it should be withdrawn slowly as fatalities have occurred where the fluid was withdrawn too rapidly.

PATHOLOGY

Conducted by Jno. G. Wurtz, M. D.

The Treatment of Acute Empyema.—The Journal of the American Medical Association for September 13, 1919 editorially discusses the interesting developments in surgical therapy of empyema of the chest in the past two years. "In the pre-war days it had been accepted that the proper treatment of an accumulation of pus in the pleural cavity was free drainage by thoracotomy, with or without rib resection, and usually without irrigation, supplemented by the use of breathing exercises and mild calisthenics to encourage expansion of the lungs. A few surgeons attempted further to supplement thoracotomy by the use of a suction apparatus applied to the drainage tubes, but without sufficient success to encourage general adoption of this measure."

The principal objections to simple thoracotomy were collapse of the lung and the annoyance of an abundant and frequently long lasting drainage.

During the war the Army Medical Corps had to deal with a large number of postinfluenzal empyemas and the following methods of treatment were used: "1. The Thiersch or closed method in which a catheter is passed into the chest through a trocar and the trocar removed, the catheter being anchored to the chest wall by adhesive plaster; to the outer end of the catheter is attached a collapsible rubber tube, the free end of which is inserted into a bottle of water. 2. The Thiersch method plus the instillation of antiseptic solutions. 3. Thoracotomy with free, open drainage plus irrigation with antiseptic solutions."

"Conflicting reports have appeared concerning the efficacy of each of the numerous modifications suggested, but at last we seem to have returned to the pre-war conception of the necessity of free, open drainage in the treatment of true empyema, the principal remaining bone of contention being that of the instillation of antiseptic solutions into empyema cavities."

"In a discussion of this subject it should never be forgotten that empyema occurring in influenzal pneumonia is quite different pathologically from the postpneumonic empyema with which we are familiar in civil life. In the former, a purulent pleural exudate appearing within a few hours of the onset of pneumonia is of secondary importance to the pulmonary condition. If prompt thoracotomy is done, grave respiratory embarrassment is almost certain to follow. The source of intoxication at this time is in the lungs, not the pleura. Treatment should be palliative—by aspiration. As the pneumonic process subsides, the pleural exudate may be absorbed without further treatment; if spontaneous cure does not occur, thoracotomy will be necessary, but should never be done while the pulmonary inflammation is active. Early thoracotomy was apparently an important contributing cause of the high mortality from empyema during the early months of the epidemic. In the case of empyema following lobar pneumonia, the pleural exudate becomes purulent later in the course of the pneumonia, and as a rule is then the sole source of the toxemia from which the patient suffers."

The Role of the Pathologist in the Practice of Medicine.—MacCarty and Broders (*Jour. Lab. and Clin. Med.*, August, 1919, p. 687), give statistics showing the value of clinical laboratory examinations and point out that the pathologist's reports have one or more of the following values to the patient and clinician: 1. They confirm the diagnosis of which there might be a clinical suspicion. 2. They actually make the diagnosis in which there is no clinical diagnostic suspicion. 3. They recognize accessory pathologic conditions. 4. They correct the clinical diagnosis. 5. They confirm the positive clinical diagnosis. 6. They determine the degree of the process of disease. 7. They determine the physical status of the patient preparatory to possible operation. 8. They help to determine the extent of the operation. 9. They give data for the pre-operative, operative and post-hospital prognosis. 10. They determine the cause of death in non-operative and operative cases. 11. They determine the cause of death due to false operative judgment. 12. They determine faulty operative technical causes of death. 13. They assist in determining causes and methods of surgical infection. 14. They assist in clinical, surgical and laboratory research.

OTOLOGY AND LARYNGOLOGY

Conducted by J. V. F. Clay, M. D.

Treatment of Sea Sickness.—(A. E. Lemon, *J. A. M. A.*, July 12, 1919). The author returning from France was seized with sea sickness as were also 90% of the troops aboard. He obtained relief by packing the external auditory canal with gauze sufficient to cause a sense of pressure in the ear. The relief was immediate. In several cases after the packing was removed the sea sickness immediately returned and was again relieved by repacking the ears.

Albuminuria after Operations upon the Nose.—(Abs. *J. A. M. A.*, August 9, 1919). Barajas was recently called in consultation in a case in which, after turbinectomy, diffuse oedema developed from head to feet with intense albuminuria. The latter gave the clue as he has encountered a number of cases in which albuminuria followed cauterization or operation upon the nose. It is evidently a reflex action and soon subsided. He theorizes to explain the course of the reflex by way of the pituitary and medulla oblongata.

Asthma as a Nasal Reflex.—(Sluder, *J. A M. A.*, Vol. 73, No. 8). Sluder contends that in man the sympathetic nervous system has the power of transmitting, under pathological conditions, afferent pain impulses from the nasal ganglion into the shoulder and neck. Also it is assumed that the sympathetic nervous system is capable of transmitting afferent impulses which are not painful sensory ones because many patients with nasal asthma do not have any pain. The sympathetic system in the nose is derived from the nasal ganglion receiving its sympathetic supply from the vidian, great deep petrosal, carotid plexus, superior cervical ganglion, etc. The afferent impulses may be traced from the inflamed nose by way of these nerve paths to the lower cervical and first thoracic ganglions which are often united and spoken of as the stellate ganglion. Through this ganglion fibers from second, third, fourth thoracic nerves pass downward and are accelerator fibers for the heart and vaso motor for lung. Transference of the impulses from cervical sympathetic to cardiac accelerator and pulmonary vaso motor fibers can be speculated upon. It would seem however that the relay station for asthma reflex must be in the cervical sympathetic ganglion.

Graduate Teaching of Otolaryngology.—(Dean, *J. A. M. A.*, Vol. 73, No. 3). Dean, in addressing the section of Laryngology, Otology and Rhinology of the A. M. A. June 1919, writes: The function of the undergraduate teaching is to make the medical student conversant with Otolaryngology to the extent that he will have an understanding of the essentials of general diagnosis and treatment and to convince him that Otolaryngology is a specialized field requiring special training. The time usually allowed for the undergraduate teaching of the subject is barely sufficient to accomplish these two things. Experiences during the war indicate the necessity of standardizing the requirements for practice of this speciality. Seventy per cent. of the medical officers reporting at one camp as otolaryngologists were rejected because of incompetency. If this be the showing made at army camps what a revelation if we could but look into the work of the men in

civil practice. Many of the men rejected were posing as otolaryngologists in their respective communities.

Dean feels that the responsibility for this is to be placed upon the profession in that proper facilities for their education have not been provided. Short courses are responsible for inefficient otolaryngologists. Practitioners are misled in the belief that a few weeks course is all that is necessary. The essential thing in the development of a specialist is that he be well grounded in general medicine. The establishment of a degree that will indicate to the layman proficiency in otolaryngology is under consideration. A committee now exists on undergraduate and graduate teaching of otolaryngology.

Blood Examinations in the Surgery of the Nose and Throat.—(Oppenheim and Gottleib, *Laryngoscope*, July, 1919). These authors are of the opinion that severe and even fatal hemorrhage attending nose and throat surgery occurs more frequently than recorded. Very little attention is given to the subject in works of reference. They state that it is a lamentable fact that, of all those of the medical profession who would dare do any kind of surgical operation, probably more have the temerity to attempt operations upon the nose and throat, with less knowledge, than upon any other portion of the human body. They feel that their investigations in cases of severe bleeding do not warrant such excuses as abnormal position of vessels, etc., the complication being due to lack of preliminary investigation of the patient to be operated upon or, in some cases, to very decided error in technique. They call attention to the large numbers of cases operated in clinics in which but a very cursory examination of the nose and throat have been made.

Compression they have found to be generally used. The application of haemostatic forceps was unusual. They criticize, and justly so, the removal of patients from the operating room with the throat oozing blood. Throat surgery is not different from surgery elsewhere. A bleeding point here should receive the same surgical attention as elsewhere.

Coagulation of the blood in tissues or outside of the body occurs in from three to ten minutes. Blood outside of the body requires a longer time to clot than in a vessel or in tissues. All coagulation tests fail to recognize that contact with the tissues accelerates the coagulation. They accept Howell's theory. Fibrin does not exist as such in the blood but is formed from fibrinogen by the action of thrombin upon it. Thrombin is a protein substance which does not exist in the circulating blood but is formed by the interaction of prothrombin and calcium salts. Prothrombin is not active normally while the blood is in the vessels. It only becomes active after the bleeding has taken place, there being in the normal circulating blood antithrombin which prevents the action of prothrombin. Blood platelets and cells where they undergo disintegration and the lacerated tissues produce a substance which neutralizes anti-thrombin and allows thrombin to be formed by a combination of calcium salts and prothrombin.

Coagulation is tested by puncturing the skin and blood sucked into a .2 c.c. pipette and placed in a thermostat at 37° C and observed every two minutes. From time to time a small drop is blown upon a glass slide. When coagulation is complete it is very difficult to blow the blood from the pipette. The average time estimated in over 400 cases was 6.3 minutes, the most prolonged was 29, the shortest 1½ minutes.

A great deal of stress is placed upon the bleeding time. This is determined by noting the time when the skin is pierced and observing how long

it will bleed by gently squeezing the part from time to time. In 200 cases the average time was 5 minutes, the longest 29, the shortest 2 minutes.

Coagulation may be prolonged, bleeding time short, or vice versa or both may be prolonged.

Operation is postponed when either the bleeding time or coagulation time varied much beyond the limits of normality.

A series of several cases having delayed coagulation were successfully operated by use of large doses of calcium lactate.

In purpura the bleeding time is prolonged and coagulation is normal. It is caused by some toxin which dissolves the blood plates and injures the blood within the vessel walls. Calcium administered in these cases is of no avail. Here human serum is indicated.

Cases have been reported in which the coagulation time and bleeding time are prolonged and in which there is a dimunition of blood platelets. They are rare.

In anaplylactic conditions coagulation time is prolonged and very often bleeding time also is prolonged. This has been observed in cases suffering from anaphylaxis due to asthma or pollinosis.

Practical Value of Ear Studies.—(Fisher, *Laryngoscope*, June, 1919). Examination of special senses plays an important role in diagnosis since each special sense organ consists of a peripheral end organ, nerve pathways and nerve centers for the reception and interpretation of stimuli. Upon examination of the special sense organ the physician is enabled to determine the condition of the various portions of the central nervous system through which the special pathways travel. The motion sensing portion of the ear constitutes the beginning of an additional special sense and furnishes an additional means of determining the integrity of an extensive portion of the central nervous system. The examination of the organ is accomplished by turning the individual in a revolving chair or by irrigating the ear with either hot or cold water. These stimuli set in motion the lymph which produces an eye movement and vertigo. If the lymph movement in the ear causes an eye movement there must be a system of nerve pathways between the ear and eye muscles and if the lymph movement produces a conscious sensation of turning it indicates a system of nerve pathways between the ear and the cerebral cortex. The pathways for the eye motion and vertigo are all together within the internal ear and the eighth nerve; the eighth nerve enters the brain stem at the junction of the medulla oblongata and the pons. It breaks up into two portions, the eye movement fibers going to the posterior longitudinal bundle and the vertigo fibers proceed to the cerebellar nuclei and terminate in the temporal lobe of the cerebrum of the opposite side. Normal sense mechanisms must produce normal responses; in the case of the ear, nystagmus and vertigo. When upon stimulation these phenomena do not occur it definitely indicates a pathologic disturbance at some part of this mechanism. The trained otologist can visualize the nerve distribution and locate the position of such a pathological lesion.

Nasal Hydorrhoea.—(Thompson, *J. A. M. A.*, Vol. 73, No. 8). This rare disease, also called rhinedema or oedematous rhinitis, has been given but scant attention in literature and because of this cases are being overlooked. It may probably be best defined as an obscure nervous disease, the nasal symptoms predominating, and having some relation to angio-

neurotic oedema. Both conditions have been observed in the same patient. It favors young adults of sedentary habits. The pathology is a dropsy; the connective tissue spaces of the turbinated bodies are filled with serum. Symptoms consist of extreme nasal irritation followed by sneezing and very profuse watery discharge from both nostrils. Associated is a marked mental depression. The discharge varies from an ounce to half a pint in 24 hours. The fluid is alkaline in reaction, contains traces of sodium chloride and traces of phosphates and mucin which differentiate it from cerebro spinal fluid. The turbinates are pale, swollen throughout their entire extent. No hypertrophy exists. Season has but little influence upon it. Local treatment offers little. Epinephrin and cocaine have been used. A spray containing atropine is also advocated. One observer advises the use of calcium lactate, 30 to 40 grains daily. General hygienic attention with tonic treatment offers best results.

GYNECOLOGY

Conducted by Norman S. Betts, M.D.

Some Urologic Aspects of Dermoid Cysts.—Quinby, (*Jour. A. M. A.*, Oct. 4, 1919) reports three cases of dermoid cyst causing unusual complications in the urinary tract.

Case 1 was a multiparous woman aged 25 with a chronic bleeding ulcer of the bladder which was a complication of a dermoid cyst of the anterior vaginal wall and which was caused by the latter. Excision of the ulcer and tumor effected a permanent cure.

Case 2: an unmarried woman aged 43 presented herself with a history of dysuria for the past four months. There was a firm, rounded mass filling the pelvis and rising half way to the umbilicus. At operation the mass was found to be a dermoid cyst arising from the right ovary, intimately adherent to all pelvic structures and with its cavity communicating with the bladder. The growth was removed with great difficulty on account of dense adhesions. The post-operative course was unsatisfactory and one week later a secondary operation was performed because of evidence of bowel obstruction. Adhesions were numerous but no positive bowel obstruction was found. The patient did not rally and died 36 hours later. At autopsy paralytic ileus following fibrinous peritonitis was found, together with necrosis of the posterior bladder wall, with cystitis and cellulitis of the perivesical tissues.

Case 3: a nurse, aged 27, having complained of "stomach ache" had been treated for gastritis. Renal colic was later suspected and a roentgenogram was taken which cleared up the diagnosis. Two teeth were plainly seen at the level of the pelvic inlet and it was evident that the patient was suffering from an ovarian dermoid cyst since no evidence of calculus was found. While awaiting operation, sudden and violent symptoms of bowel obstruction occurred. The abdomen was hurriedly opened and it was found that there were two dermoid cysts firmly impacted in the pelvic brim. The history and operative findings indicated that the symptoms of bowel obstruction were due to pressure on the pelvic colon while her initial symptoms were due to pressure on left ureter causing hydronephrosis. Recovery was uneventful.

A Study of Bladder Function.—Curtis (*Surg. Gyn., and Obst.*, 1919,

xxix, 24) has made a study of the effect of urinary retention in the bladders of twenty-two male rabbits which were paralyzed by severing the spinal cords. This produces a bladder paralysis analogous to that which occurs in soldiers who have suffered gunshot injuries to the spine and cord. The animals were kept in sanitary cages which permitted the immediate collection of voided urine. The buttocks and genitals were kept clean by frequent bathing, shaving and the application of petrolatum. Vesical distention was present in all but one rabbit which died three days after the operation. The bladder was moderately distended in eight and in the other thirteen it filled the entire lower abdominal cavity. One rabbit died from spontaneous rupture of the bladder. The ureters of four were not distended, three were doubtful, while fifteen were dilated, some to an extreme degree. Extensive vesical erosion, ulceration and submucous hemorrhage were frequent. Of the twenty-two cases the kidneys of seven were normal and fifteen were pathological. Bacteriological study showed that infection was present in 12 of the 22 cases. These experiments show that the unrelieved paralyzed bladder offers a double menace:—(1) through frequent infection of the urinary tract due to contamination of the static urine; (2) through back pressure which distends the ureters, seriously interferes with kidney function and damages the kidney tissue. From a clinical standpoint the catheter should be passed often enough in these cases to prevent distension and with every aseptic precaution.

SURGERY

Conducted by J. Dean Elliott, M.D.

The Treatment of Hour-glass Stomach.—Walton states that, with the exception of a few cases due to carcinoma, dense perigastric adhesions or congenital malformation, all hour-glass stomachs are caused by chronic ulcers situated upon the lesser curvature and associated with widespread fibrosis whose contraction leaves only a narrow band of normal stomach tissue along the greater curvature. In addition there is almost always a constriction of the pylorus.

The following procedures have been followed by various operators:—digital dilatation; gastroplasty; gastro-gastrostomy; single gastro-enterostomy and double gastro-enterostomy. The results have not been satisfactory, the best obtainable statistics showing not more than 70 per cent. of successes.

In over 80 cases the author has excised the ulcer, temporarily closed the pylorus and made a gastro-enterostomy with very satisfactory results. Clamps are placed obliquely across the stomach on either side of the ulcer which is then completely freed from surrounding structures, the diseased area is excised and the stomach closed. In order that the lumen of the stomach may have a diameter of at least four and one-half inches this suture is performed upon the principles of Finney's pyloroplasty. The two posterior edges are first united by two rows of catgut sutures, each row commencing at the apex of the V and ending in the lesser curvature. The two anterior edges of the V are united in a similar manner. The incision must be planned so that the sides of the V are at least as long as the diameter of the stomach. Every care must be used to preserve the band of normal mucous membrane for it is through it that the posterior gastro-enterostomy is made. The opening should be four inches in length and its center opposite the line of suture closing the excision. In this way both pouches would be drained even if

the hour-glass contraction recurred. The pylorus is now occluded by a simple, through and through, mattress suture of silk which is sufficient to close the lumen for at least two to three months.—*Surgery, Gynecology and Obstetrics*, September, 1919.

Bone Fistulas after War Wounds.—Sutro has treated several hundred of such cases, all of whom had had several previous operations so that it was very unusual to find sequestrums or foreign bodies in the wounds. In only rare instances did the suppuration proceed from a focus of infection in the external surface of the bone. The great majority presented a focus in the interior of the bone or of the callus, except in the cranium or scapula.

Two factors dominate all the process of the bone fistula: first, the presence of a cavity with rigid walls; second, the infection of the cavity. Each is essential to the other and the removal of only one of the factors is not sufficient to obtain a permanent cure.

It must be borne in mind that bone is a specialized tissue whose evolution is terminated and which by itself is incapable of furnishing bone to fill the cavity. It is equally incapable of giving healthy granulations. Unhealthy bone produces fungosities. These fungosities are the production of the infection of the wall of the suppurating cavity, which provokes the necrosis of little bony lamellæ, around each of which grows a granulation. The depth of bony infection is superficial, though the bacterial flora is rich, and these fistulas present little of the phenomena of infection as they communicate with the exterior and have little retention. The surrounding lymphatics are blocked and there is no absorption of the septic products, but a slight blocking of the communicating tract will cause the appearance of fever and other evidences of septic intoxication.

The treatment varies with the bone involved but it always depends upon certain principles. The incision should be placed where it will cause the least damaging after-effects, such as interfering with muscular action, even disregarding the site of the fistula when necessary. The bony cavity must be suppressed; this is accomplished by resecting one of its walls so that only a depression remains in the bone. The fungosities and sequestrums are removed by gentle but careful curettage.

The cicatrization of bone is brought about by granulations, but they will not come from the bone; they will come from the depth toward the periphery and will grow from the neighboring muscles. These granulations will little by little cover the vivified surface of bone and when this is completely covered the healing is assured. To arrive at this result it is necessary that the bony surface be maintained sterile for several weeks and the Carrel-Dakin treatment is used for that purpose. The author does the contrary to most teachings: that is, he operates first and then irrigates the wound to maintain the result of the operation. instead of attempting to sterilize the wound before operation. If the operation has not been done properly the irrigation will not heal the lesion. He never employs an Esmarch bandage, but secures the most careful hemostasis of the soft parts and commences the irrigation immediately after the operation. He never leaves a tampon for a compress will reinfect the bone, which has just been cleaned, within twenty-four hours.—*Journal of the A. M. A.*, Sept. 6, 1919.

UROLOGY

Conducted by Leon T. Ashcraft, M.D.

Secondary Melano-Epithelioma of the Bladder.—C. G. Richards (*Surgery, Gynecology and Obstetrics*, September, 1919) describes a case of this rare condition. The patient, a man of forty-five, had pigmented moles in various parts of his body. One of these, on the right side of the abdomen, had developed into a melano-epithelioma, and had been excised. All the glands in both groins and Scarpa's triangle were removed, and the external saphenous vein ligated. After this time, radium treatment was given at frequent intervals. Eight months after the last operation, another gland in the inguinal region was found to be of the same character as those previously removed, and was excised. Ten months after this, urinary symptoms developed; and cystoscopic examination revealed a number of areas containing black, rounded tumors of varying size. Intravesical radium treatment was immediately begun. At the time of the report, the patient had received four hundred milligram hours, without causing any notable change in the condition. One or two of the tumors, indeed, seemed to have slightly increased in size.

Foreign Body in the Urinary Bladder.—B. H. Caples (*Surg., Gyn. and Obstet.*, Sept., 1919) reports the case of a man who, in order to conceal a slight urethral discharge from the examining surgeons of the army, inserted a small pencil of material from a paraffin candle. By the next morning, this mass had passed into the bladder, and was producing painful and bloody urination. An X-ray examination revealed the material, in the same amount, but altered in shape, just within the neck of the bladder. A number of attempts to remove it by means of a cystoscopic rongeur having proved vain, experiments were made with various solutions in order to find which would be most suitable for dissolving the candle material. A mixture of 33½ per cent. gasoline in paraffin oil dissolved a small cube of candle substance in 12 hours, and could be held in the mouth for several minutes without irritation. The other substances were more irritating and not much more efficient, so this was selected. Seven injections of 125 c. c. each were given during the course of three days, and retained from an hour and a half to five hours. The patient's condition improved rapidly; and two days after the last injection, was normal. A week later, cystoscopic examination revealed no trace of the paraffin.

Strictures and Obstructions of the Ureter with a Method of Reestablishing its Patency.—Martin Molony (*Urol. and Cut. Rev.*, Oct., 1919) states that infection and inflammation in the ureter are not primary, but are possibly secondary to the mechanical effects of obstruction. In a good many cases, if the obstruction is removed early, the infection will disappear. In the absence of a severe periureteritis, a well-defined stricture can be shown by pyelography and can be dilated to a large size. When the obstruction is removed and a good drainage through the ureter obtained, many dilated kidneys, even after infection has taken place, will return to their normal size. The author claims that his technique is devoid of danger to the patient and is easily carried out; and that there is far more prospect of a successful result than from any plastic operation. Where there are two or more strictures, this simple method will overcome all of them. The author's

technique is as follows: The kidney is catheterized, and the pelvis is thoroughly washed out several times with a weak solution of cyanide of mercury so as to have a clean field during the operation. The catheter is left in place. The stone is removed through the pelvis and the various calices are explored with the finger. The tip of the retained catheter is easily found in the pelvis, and a large graduated catheter is stitched into it. By traction on the small catheter, the large one is drawn down through the ureter and bladder, and out through the urethra, leaving its funnel end in the dilated pelvis, which is sutured over it. The kidney is returned to its bed, and the wound closed without drainage. The tip of the catheter protruding from the urethra is cut off so as to make it large enough to insert a fine nozzle for irrigation. The catheter funnel lying in the pelvis gives good drainage, relieves pressure on the sutures in the pelvis during the healing of the wound, and helps to prevent fistula. Blood-clot, fine gravel or pus is washed out twice daily by the nurse with small quantities of salt solution or cyanide of mercury. After a week or ten days, the catheter is drawn down an inch or more every two days (a shadow catheter is best, so as to watch its progress). When the funnel end reaches the bladder, the catheter is removed and the patient is allowed to get out of bed. Four illustrative cases are cited.

A Large Vesical Calculus. Double Pyonephritis. Report of a Case.—Thomas F. Laurie (*Urologic and Cutaneous Review*, Oct., 1919) reports the case of a man who had suffered with attacks of cystititis for about two years. The symptoms had increased so markedly that he had been compelled to urinate every fifteen minutes during the night before consulting the author. On examination, he passed about two drams of very cloudy, foul-smelling urine, which resembled thin pus. Above the pubes could be felt a hard, rounded mass, the size of an orange, which was tender. Cystoscopic examination revealed a white calculus. Both kidneys were palpable and tender. The next day, a calculus measuring 4 x 2 x 2½ in. was removed from the bladder through a suprapubic incision. He returned from the operating room in good condition. Up to twelve o'clock that night, he passed 79 ounces of foul-smelling urine. Five days after the operation, irrigations with boric acid solution were instituted, and were continued daily for four days. Then an in-dwelling catheter was inserted, with the hope of closing the suprapubic incision. The bladder was irrigated daily through the urethra. Five days later, an X-ray showed a shadow resembling calculi in the right kidney. The patient began to fail rapidly, and expired about ten days later. Autopsy showed a kink in the right ureter, causing urinary obstruction, and probably consequent infection of the right kidney. The kidney tissue showed extensive infection and destruction. The author thinks it conceivable that the primary cause was the obstruction to the urinary flow from the right kidney, and that this urinary stasis, in turn, caused infection of this kidney. As the result of this, there was secondary cystitis, which probably became very severe with the formation of the stone, which proved to be composed of ammonium-magnesium-phosphate. The infection in the left kidney, Laurie believes, was probably through the lymphatics from the bladder. Death was apparently not due to uremia, as one might expect, but exhaustion from toxemia as the result of the infection.

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THERAPEUTIC EFFICIENCY IN THE TREATMENT OF EPIDEMIC INFLUENZA

BY

ELDRIDGE C. PRICE, M.D., BALTIMORE, MD.

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EFFICIENCY is "the power that accomplishes a desired or designed work." Therapeutic efficiency, therefore, is the restoration of the patient to health by the application of some means designed for that purpose.

Efficiency is also a matter of degree. One method may be more efficacious than another, and while several methods may be more or less effective, yet only that power which comes nearest to the full accomplishment of that designed may be regarded as approximating most closely complete efficiency.

The effort to discover the method or detailed means by which more lives were saved in the epidemic influenza of last year, than by any other method or means, should be welcomed by all schools of medicine no less than by the public at large: simply because such research will put it into the power of the general medical profession to reduce the mortality of future similar epidemics to the lowest possible percentage. Should the results of such an investigation contradict our preconceived theories and practices we should not resent such discovery, but welcome the improved resources placed at our command.

It is difficult to decide, however, upon the efficiency of any method of treatment of any condition, unless we know the proportion of spontaneous recoveries to the number of cures resulting from the given method. As there is no means of de-

termining the number of spontaneous cures having occurred during the epidemic under consideration, and as there has not been made up to date a complete tabulation of mortality statistics, it is impossible to do more than approximate the efficiency of any method or means of treatment.

For those who have impartially studied the various methods of therapeutics, it has not only been impossible to avoid adopting definite conclusions, but it has been logical and right to accept as a guide in the conduct of epidemic cases the facts of observation and experience of the past; and for this class of philosophers the inevitable conclusion has been that to homœopathy the medical profession must look for the lowest possible influenza mortality. The endeavor of this paper, therefore, is to discover, if possible, whether or not such an *a priori* conclusion is sustained by *a posteriori* facts. Let us see.

Scattered through medical literature here and there may be found occasional statements of percentages of deaths out of the total number of civilians treated in a circumscribed territory (and the diagnoses have not always been made by physicians), but so far as my research has revealed there is no general tabulation of mortality throughout the world, or throughout any given country; and the estimates made make no distinction between the applied methods. Neither is it yet possible to make any definite statements concerning epidemic influenza ravages in the army.

An inquiry addressed to Lieut. Col. Albert G. Love, of the Surgeon General's Office, elicited the fact that "the data relative to the influenza epidemic of last year" will not be ready for distribution until "about the first of the year." It is, therefore, obviously impossible to make a definite statement as to the total results of any particular therapeutic method in use during the epidemic. The best that can yet be done is to utilize the comparatively few official tables of limited areas that have been compiled, together with records compiled by individual effort of physicians. This is not satisfactory, but it is the best that can be done under the circumstances. From such statistics it is impossible either to prove a theory or to come to a definite, reliable conclusion concerning therapeutic efficiency. Strong probabilities, however, may be discovered which may be accepted not only as significant, but as prophetic of the solution of the problem were all the factors obtainable.

From the United States Public Health Reports may be

extracted some facts of general interest concerning the prevalence and some detailed percentages of the population stricken, together with a few mortality rates. It is recorded that in South Africa over 40 per cent. of the population was affected by influenza, that there were "2,616,805, and of these 130,471 were fatal—a case mortality rate of 5.32 per cent." and that "The case mortality rate among the European stocks was less than half that among the non-Europeans, the respective rates being 2.57 and 5.90 per cent." The total death rate from influenza, from August 1st to November 30th, 1918, per thousand of population, for the Union of South Africa, was 22.80 per thousand.

Relative to the United States, the following is stated: "Based on incomplete statistics which represent, however, all the main geographic divisions of the country, including both urban and rural populations, the deaths in the civil population of this entire country directly attributable to the epidemic, are estimated at not less than 450,000, or more than 4 per thousand." This is, of course, in proportion to the total population.

Localizing cases to small districts, it is stated that the "percentage of population attacked varied from 15 per cent. in Louisville to 53.3 per cent. in San Antonio, Texas, the aggregate from the whole group being about 28 per cent." And again, "The case fatality of pneumonia tended to be fairly constant, around 30 per cent., except in San Antonio, where it was only 18.5 per cent."

In the Chicago Telephone Company there were 1448 cases of influenza, and of these "there were 22 deaths attributed to influenza and influenza pneumonia, a mortality of 1.5 per cent." The methods of treatment, however, are not stated, and as Chicago has a large number of homœopathic practitioners it is not unreasonable to suppose that this small percentage was at least in part due to homœopathy.

"The Medical Clinics of North America," for November, 1918, gives a much less cheerful record of cases treated in the University Hospital of Philadelphia, Pa., viz.: Total cases of influenza, also including pneumonia, 263, of which 52 died, making a 20 per cent. mortality; cases admitted with pneumonia, 84, of which 48 died, making a mortality of 54 per cent.; and of 29 cases developing pneumonia after admission to hospital, 6 died, or 20 per cent.

In Dr. W. A. Pearson's most interesting article in the

Journal of the American Institute of Homœopathy, for July, 1919, he says the average mortality of the influenza victims who were under old school treatment, was "about 30 per cent." It is to be presumed that Dr. Pearson has based his mortality conclusion upon a compilation of all civilian statistics obtainable at the time, believing these statistics to be fairly representative. We will, therefore, assume this 30 per cent. as the mortality rate with which to compare the obtainable results of homœopathic treatment which from Dr. Pearson's tabulation is less than 2 per cent.

Dr. Pearson has been at some pains to collect reports upon which to base an average for mortality and of success, and from the table submitted some interesting details may be extracted; for example: One physician reported having treated 1350 cases with but 5 deaths, one reports treating 1200 cases with but 4 deaths, one treated 100 cases with 3 deaths, one treated 1000 with 1 death, one treated 420 with no deaths, 3 treated 300 with no deaths, one treated 200 with no deaths, 3 treated 100 with no deaths, and many others treated smaller numbers without fatal termination. Out of the 88 physicians reporting, the greatest number of deaths noted was 35 in 180 cases treated by one practitioner, another lost 14 out of 700, another 15 out of 500, another 10 out of 240; on the other hand in the practice of 24 physicians 3519 cases were treated without a death.

One of the most remarkable and satisfactory supplementary reports, which may be added to Dr. Pearson's tabulation, is from Dr. McCann, of Dayton, Ohio, published in the February, 1919, issue of the Journal of the A. I. H. He says: "I have treated one thousand cases of influenza. I have the records to show my work. I have no losses. * * * Please give all credit to homœopathy, and none to the Scotch-Irish American.—T. A. McCann." Dr. W. R. Andrews, formerly of Rockville, Md., and once a member of this society, writes in the Institute Journal for January, 1919: "In the month of October I treated, in round numbers, two hundred cases without a death." Add to the foregoing the experience of Dr. Martha A. Boger, of Portsmouth, N. H., with 531 cases and 2 deaths; Dr. G. G. Bascom, of Lake Wilson, Minn., with over 300 cases and no deaths, and Dr. Cora King Smith, of Washington, D. C., with 350 cases and one death, and our record swells to 31,495 cases treated by homœopathic physicians, with

276 deaths. This means a mortality of 8.76 per thousand treated, or a fatality of less than one per cent. Such records as here noted are not exceptional, but are quite common. As Dr. Pearson says: "All reports received have been tabulated and no attempt made to report only the more favorable results." Such records may reasonably be regarded as justifying the claim of superlative therapeutic efficiency for the principle of similars in epidemic influenza.

Compare the 30 per cent. mortality of the orthodox method with the less than 1 per cent. of homœopathic fatalities, and which does common sense elect has having the higher degree of therapeutic efficiency, which should the conscientious physician practice, and which should the scientist endorse?

But, it may be claimed, the hypodermic results of the anti-influenza bacterins are even now threatening to abort all epidemics of influenza, and to cure all who have not been immunized. Possibly, we fervently hope this may be true. It can not, however, be claimed to be superior to homœopathy, simply because it illustrates this very principle of similars. All reports of immunization and of cures by the use of anti-influenza vaccines may, therefore, be credited among the good results of homœopathic treatment. Of course, this includes Dr. Duncan's auto-therapeutic method also, whether used in the hospitals or private practice of individual physicians of the older school of medicine, or by the homœopathic practitioner. It all means homœopathy.

At this juncture it is quite in point to call attention to the means used by Orthodox medicine in the endeavor to cure influenza patients. The treatment suggested by Osler in 1894 has been continued with little modification up to the present day. This treatment consists in the use of purgatives, somnifacients, diaphoretics, antipyretics, and finally stimulants. These are the agencies advised *ex cathedra* and used *secundum artem,* and the agents are citrate of magnesia, castor oil, and compound catharic pills; Dover's powder—which combines the effect of an anodyne and also a diaphoretic—acetanilid, aspirin, quinine and codeia, in large amounts; and finally, should there be suggestion of cardiac weakness following this treatment stimulants are used, and in the convalescent stage "strychnia in full doses." So far as may be judged, this is the *ne plus ultra* in treating epidemic influenza, and fairly demonstrates the degree of therapeutic efficiency of orthodox medicine in this field,

from which the 30 per cent. mortality record was obtained in the epidemic of 1918.

Of course, we are all familiar with the treatment used in our own school, the drugs of greatest service, according to general experience being, gels., bry., eupat. perf., cimicif., bellad., acon., ver vir., cuprum, kali phos., etc., etc., according to individual indication. The complications, such as pneumonia, meningitis, etc., as Osler says, "should receive their appropriate treatment."

In his "Organon of the Healing Art," Hahnemann phrases one of the most benign of altruistic epigrams, when he submits to the medical profession this initial sentence in his great work: "The first and *sole* duty of the physician is to restore health to the sick."

This is obviously so true that when the conscientious searcher for the means of fulfilling the duty of the physician, is confronted by the therapeutic facts and fatalities of the last great epidemic of influenza, honesty of purpose must of necessity compel a consideration of the meaning of the marked disparity between the mortality of the two great medical schools; and this same honesty of purpose will impel the investigator to give serious attention to the agents and the principles of their action by which this most remarkable success of the homœopathic school was secured.

Of course, these remarks are intended to appeal to physicians of honesty of purpose only; others are unworthy of consideration.

There are strange conditions and situations in this world of mankind, and it is conceivably possible that even some men of apparent honesty of purpose, will turn a deaf ear to a suggestion the execution of which would place them in a new environment in the medical profession, for honesty of purpose is not always easy to fathom; and as an alternative it may be suggested that, if an endeavor to master the art of homœopathy be considered too arduous a task, all cases of influenza that may appear in the future be referred to the school that has established its superlative therapeutic efficiency through its ability "to restore health to the sick," at least in this particular nosological field.

It is not to be expected that the great majority who may have the facts brought to their attention will be influenced by them to any material extent, but it is to be hoped that the small

minority who may be independent thinkers will accept the obvious, and having accepted the obvious they must recognize as reasonable the assumption that if the application of the great homœopathic principle is productive of such curative effects in influenza, it cannot be without virtue in the general field of curable pathological conditions.

Honesty of purpose, therefore, as suggested, should compel those who recognize that "the sole duty of the physician is to restore health to the sick," either to properly qualify for the performance of this imperative duty, or furthermore, to restrict their art to one or more of the various effective modes of mechano-therapy, which of necessity includes all the surgical subdivisions, electricity, etc., etc., and refer the great work of healing the sick by means of drugs to those who are properly qualified for such duty.

The proof of the method of greatest therapeutic efficiency in the treatment of epidemic influenza, stands as a challenge to the medical world to arm itself with this efficiency for future therapeutic victories.

The Literary Digest for October 18, 1919, contains the following which may be regarded as in point just at this time: "John D. Rockefeller * * * has done much for medical research. But his recent gift through the General Educational Board of $20,000,000 to be spent, both principal and interest, 'within fifty years for the improvement of medical education in the United States,' seems to the Springfield *Union*, among other papers, 'particularly timely and important in its bearings on the public welfare.' * * * 'The conditions are especially suited just now to a campaign to increase the practical efficiency of these schools,' medical schools, by "utilizing the material that has been collected in recent researches'."

May not the school that has proven itself so good an exponent of therapeutic efficiency, justly ask for the favorable attention of the Rockefeller General Educational Board?

Great causes not rarely start from small beginnings, and even in our midst in our conservative State of Maryland, practical investigation into homœopathic efficiency is in progress. Forty-six of our older school brothers are at present testing the efficacy of the relationship of similars, twenty-seven of whom are residents of the city of Baltimore. Not only have they experimented in the field of influenza, but having been encouraged by results they have extended their investigations into

other pathological conditions, and we find one of these investigations using large quantities of calc. phos. in rachitis, and also in the treatment of enlarged tonsils, with alleged good results, the triturations used being the 3rd, the 12th and the 30th decimal; another has been successful in relieving the effects of poison ivy with rhus, and in dropsical conditions he is using apis; another has been using cham. 3x and calc. carb. 6x in grippe; while gels., bry., and bellad. have found favor with the discriminating forty-six in the epidemic of last year. Is homœopathy dying?

In all sincerity these experimenters are to be congratulated and encouraged to continue their good work, for not only will they derive individual benefit from this work, but they will prove to be of the "little leaven" of intelligent honesty that will ultimately leaven the whole lump.

The facts at hand have been submitted to your consideration, and you are at liberty to draw your own conclusion as to the approximately relative therapeutic efficiency of the methods used in the great influenza epidemic of 1918; always remembering that efficiency is "the power that *accomplishes* a desired or designed work."

THE MEDICINAL MANAGEMENT OF UNCOMPLICATED INFLUENZA BY THE METHODS OF HOMŒOPATHY.

BY

O. S. HAINES, M.D., PHILADELPHIA.

Professor of Materia Medica in the Hahnemann Medical College of Philadelphia.

(Read before the Maryland State Homœopathic Medical Society, Oct. 23, 1919.)

You see I use the word "homœopathy" because I like it. It stands for so much that is good and true and useful in the medicinal therapy of the year of our Lord, 1919.

If modern therapeutic advance should offer to the profession any new method that would really increase efficiency, that would lower existing mortality statistics, that would make the chances of recovery better than they now are, we homœopaths would naturally be among the first to avail ourselves of such a method, because we ever hold the interests of the patient paramount to everything else. That is one of the first principles of homœopathy.

But if modern therapeutic advance can offer us nothing better than the methods of treatment which it offered the medical profession during the epidemic of 1918, then I think we should show that we are wise men by sticking very close to those therapeutic methods which a century of experience has taught us are true and reliable and successful. The physician is preeminently the man who must strive always to keep his mind wide open; broad, tolerant, receptive. He must have the courage to meet the new order of things which is ever confronting him; and he must also have the wisdom to hold fast to that which is good and true and dependable in the old.

The phenomenal success attained by homœopathic practitioners during the epidemics of influenza that have swept over this country, and, especially during the epidemic of 1918, is deserving of more than passing notice. The reason that our practitioners have been enabled to show a very low mortality rate is because, in the great majority of instances, they relied upon the homœopathic method in the treatment of this disease. They looked askance at such palliatives as aspirin—at such very doubtful measures as the serums and vaccines; and they stuck to the law of similars as the safest and surest guide.

This simple law of drug selection made us sure when otherwise we might have been doubtful. It enabled the homœopathic physicians to start their treatment of the initial stages of the disease, promptly. They lost no time. This was important because an influenza checked or mitigated in its incipiency, becomes less dangerous in its later manifestations. The remedies used were simple ones, that did not depress nor deplete the vitality of the patient; but rather tended to strengthen the vital resistance of the influenza victim.

Our practitioners did not seem to be so much concerned and confused by the various opinions expressed regarding the nature and pathological eccentricities of the disease in its fatal stages. They were only concerned in preventing it from reaching that stage. Probably not more than a half-dozen simple remedies were found necessary, but these were almost invariably used by all our practitioners, because the indications for their employment were so apparent.

Three things must surely have impressed those of you who relied upon the law of similars in your treatment of uncomplicated influenza:

First.—That convalescence started easily and early.

Second.—That complications were not apt to supervene during the convalescent period, in those cases that called you early.

Third.—That the final recovery was really quite complete and clear cut; and sequelae were not common.

It is a great thing to be able to select remedies for the sick that will not only assuage immediate suffering; but, that will at the same time favorably influence a progressive pathology, in its infancy. We should all recognize the prophylactic power of homœopathic therapy, for it is real. And yet it is not uncommon for patients to conclude the recital of their complaints with the statement that these complaints have existed ever since an attack of influenza a year or so ago. I will venture to say, without investigation, that not many of your own patients have thus spoken to you. We were interested to observe that our practitioners, as a rule, recognized the dangers of the convalescent period and insisted upon bed until health had been completely restored. Many cases of influenza discharged themselves from medical care when only half-well; and suffered the dire consequences of such indiscretions. Good brandy was difficult to obtain for those exceptional cases of pneumonia that seemed to require that good remedy.

And this leads me to remark that it is a pity that human beings elect, as beverages, those things which have either a toxic or a medicinal effect. A beverage for rational beings should first of all possess neither toxic nor medicinal effects; or it cannot help but injure them in one way or another; generally lowering very distinctly their resistance to disease.

I often think that perhaps the thing that is breaking down the hearts of so many of our busy American men of affairs is the lethal triad: coffee, tobacco and alcohol. We physicians can point out many men who rise in the morning with a regular, natural heart action; but who, after they have taken two cups of coffee at breakfast, have smoked two cigars afterwards, and had their 11 o'clock highball, exhibit a very irregular heart action and palpitation. Then it becomes impossible for them to walk up a flight of stairs without some degree of shortness of breath. Functional, we will grant; but how long may such functional derangements continue, before organic changes ensue? This is no dream of mine, but an actuality. For since prohibition has made the drinking of whisky a nearly

universal American habit, the great American sport is chasing the elusive but desirable quart to its lair; then catching it, then domesticating it. Whisky has been so thoroughly domesticated, that it might almost be termed—the great American household pet.

If you should care to read "The Lesser Writings," you will find an interesting account of an epidemic that occurred in 1798 in which our Samuel Hahnemann, then a distinguished member of the old school, discovered that the most potent medicine was camphor which he gave in doses from 15 to 40 grains daily, with splendid results. I have often wondered why this drug has not been rediscovered in modern times as the specific for epidemic influenza as it surely would have a pronounced beneficial action and might easily be a drug that would reduce mortality statistics. But in the accounts of the epidemics that have followed this one and since the announcement of the law of similars, which you will find related in the old files of the journals of our school; you will note an agreement upon remedial measures among the members of our school that is truly remarkable; and which could only be due to a general and uniform success in their use.

Now the consensus of opinion in our school is that *gelsemium* will usually answer the requirements of the initial stage and should be given either in the tincture or in a low dilution. It would be foolish for anyone to deny the great efficacy of gelsemium. Indeed we might go as far as to say that it would have been fortunate if all medical men had relied upon this drug to the exclusion of quinine, aspirin, acetanilid and the salicylates during the early stage of the disease. The results would doubtless have been better.

Nevertheless we would contend that the initial phenomena are not always best met by this remedy. They do not always respond so quickly to it as to other remedies. If the attack has been rather slow in gathering, if the patient has had a day or two of weariness; and, finally goes to bed with intense muscular prostration; if he is found lying quietly and unresponsive, with a decided disinclination for movement, and a pulse that while full is not hard; if he trembles when we ask him to move; if he is still chilly and drowsy and complains of a full congested feeling in the occipital region, with stiffness in the muscles of the neck and shoulders; we may trust gelsemium. We may disregard for the moment slight catarrhal

manifestations in the nose and throat, feeling sure that they will decline with the general improvement that follows its administration. You recognize such indications as our usual ones, and theoretically they would not call for the tincture but for the dilutions. While we shall have to admit that a solution of the tincture in water generally brought the answer, still there are some data in existence that would suggest that those who used the dilutions get quicker and more clear-cut results. I am old fashioned enough to yet believe in the value of a hot foot bath in this stage and to insist that such a patient needs nothing in the way of food. An orange juice beverage quenches thirst and that is sufficient. It is striking how sick such a patient may be in a few days, if not treated correctly. It is equally astonishing to note how much better he will be if he is kept in bed, has a hot foot bath, receives no food and is given gelsemium. The improvement begins at once and may be followed by recovery in a day or two. I am inclined to believe with Hale that we must not think that gelsemium is adapted to the acute inflammations involving the parenchyma of organs; but that it easily controls the congestive stages of catarrhal inflammation, mitigating the coincident constitutional phenomena at once. It is, therefore, prophylactic against further extensions.

But the case of influenza may begin much more abruptly and indeed with a distinct chill lasting for some time. If we should reach the patient during this chill, and find him pale and cold and with a small pulse and some evidences of shock, we should give him a rather higher dilution of *aconite* than usually used. But if, when we reach him, we find a high temperature and a quick, hard wiry pulse, we should still trust the aconite, only now it may be given in the usual lower dilutions. We must admit that even a drop or two of the tincture dissolved in a glass of water, makes an admirable solution that may be administered in teaspoon doses at frequent intervals with benefit. A larger dose of aconite will be a possible disadvantage to the patient. Our confidence in the aconite will be strong if the patient is restless. If he is disturbed by anxiety and agitation and unable to rest quietly; and if he should not show or exhibit these features, we may doubt the relationship of aconite to the case. There is no doubt that the cases beginning with a distinct chill do better on aconite than any other remedy, providing there is present that state

which we might describe as "tension." Tension in the emotional sphere, in the special senses, in the muscular and circulatory apparatus; indeed, everywhere as shown by the anxiety, the restlessness, the disquiet and agitation. In such a case it will be the exception not to find some portion of the respiratory mucous membrane already involved. Coryza, laryngotracheitis, bronchitis with harassing cough, some stitching pains in the pleurae. We need not fear but that our aconite will at least modify such beginning localizations.

Now the cases that begin with chill and that do not present the phenomena mentioned as calling for aconite, generally do better if given *ferrum phosphoricum*. You may recognize its need by the absence of that tension which aconite suits. There is not that restless agitation nor the complaints nor the fears. And the pulse is not wiry and hard; but full, round and soft. Very generally in such a case, we can recognize that real and often intense congestion exists in the respiratory mucosa. The mucous discharges are quite regularly blood streaked and may even be bloody. The picture is quite asthenic, and we shall often note that the ferrum phos. patient does not present the robustness and plethora of the aconite subject. These chill cases of influenza are likely to be cases that will presently develop some local inflammation of gravity, unless indeed we can prevent this. Both aconite and ferrum phos. have decided prophylactic powers against subsequent pulmonary engorgements and landations.

We have been in the habit of administering ferrum phosphoricum in doses of three tablets of the 3x trituration hourly; yet there are considerable data at hand pointing to the wonderful efficiency of the 200x dilution, which we are not inclined to ignore.

Occasionally, following the initial chilliness, there supervenes in influenza, a febrile picture which in every way is materially different from that which we expect and are accustomed to see. There is drowsiness and mental and physical torpor. The tongue, which at first was coated, especially in its centre, becomes far too dry and then brownish in the same location. Rumbling is heard throughout the abdomen, then some distention is noted. Presently a few loose movements of an offensive character occur. The fever curve is quite high and continuous. The pulse, soft and compressible; shows an occasional irregularity. We are momentarily confused in our

diagnostic reasoning, and perhaps send in a Widal. We are forced to conclude that the picture suggests a septic or gravely toxaemic disease. Here the homœopathic physician prefers generally to administer baptisia tinctoria, unless the case should show a remarkable physical restlessness and some mild delirium instead of the mental torpidity; in which case we should probably select rhus toxicodendron. The point of importance being to give the baptisia or the rhus at once. If we do not give the baptisia until the fourth or fifth day of such a picture it is of doubtful value and we shall probably have a septic pneumonia on our hands and then the outlook will not be good. One may exercise his own judgment regarding the preparation of baptisia in such a case. A solution of twenty drops of the tincture to the glass of water is no mean medicine, while on the other hand, we can testify that the 30x dilution has shown great therapeutic properties.

At the beginning of an influenza, it is difficult or impossible to foreknow the visceral involvements that will follow. Therefore, we must keep our eyes open, looking for localizations or new diseases. We must look for these from the very initial chilliness and we must be especially vigilant when the initial phenomena begin to lighten and convalescence seems about beginning. We all know that the commonest localization is an inflammation of some portion of the respiratory tract. This may consist merely of a naso-pharyngitis, a laryngitis, a tracheitis or a bronchitis with dry, non-productive, though painful, cough. A combination of these is common. I am not convinced that a routine prescription of bryonia here is always the best that we can do. Causticum in the 3x dilution in water, has been a valuable medicine. The localization rather high up in the thorax, the racking, hoarse sounding cough, that hurts the front of the thorax so much, but yet brings nothing up. Even should there be a sound of loosening mucus in the tubes, it will not come up. The rawness of the larynx and trachea. It acts quickly and admirably. I like this remedy also because it suits as well the slight remaining fever, the tired aching in the muscles that may still be complained of. It also seems to cover the weakness and stiffness that is so often a concomitant in such cases. If I cannot seem to get the expected relief from causticum, then a day's use of sulphur clears the outlook. What a splendid opportunity we have as an influenza passes away for the exercise of our skill in drug selec-

tion. A little study on our part and we easily get at just the remedy that puts a patient safely upon the road to health without fears of subsequent invalidism from latent lesions or the half-cured residue of inflammation.

There is a type of dry cough that followed the influenza. It was a sudden spasmodic burst of violent cough, that seemed to the patient to be occasioned by eating or drinking as if something went down the wrong way, or was brought on by laughing or even talking. It hurt the lower ribs greatly as if jarred and made them sore. You might say it was only superficial and caused by some irritation high up, but it was not. It was a serious prolonged tedious affair that might easily be the forerunner of chronic lung lesions. Now bryonia would not help. It often came on in cases that had been having bryonia. Nobody but a homœopath would be able to differentiate that cough as requiring *mephites*. An old school friend of mine was so pleased with its effects in a case requiring it, that he has since called it "the best remedy for hard dry coughs he ever knew." But we must not classify remedies in that manner. It leads us backwards rather than forwards. Mephites is only prophylactic against tubercular infection by clearing up conditions that favor such an occurrence. So likewise is drosera.

Just one more type of dry cough that often lingers after influenza and similar attacks that helps to illustrate the subject. A persistent dry cough that the patient thinks comes from a constant tickling within the larynx, accompanied by a hoarseness of the speaking voice. So far the remedy is *not clear*. But upon inquiry we note the following characteristics: There has been a decided loss in bodily weight owing to the preceding illness; and this is not made up as soon as we should like it to occur. But the main point to note is this: When going up stairs or upon exertion there is a peculiar *breathlessness*—the patient cannot understand why she or he is so completely out of breath on reaching the top of the stairs, nor why the heart beats so rapidly and forcibly. We must not explain this by telling the patient that they are still weak from the illness and that it will come right. It is not a cardiac state. It is an irritation of some areas in the respiratory tract. You may hear a few rales in the tubes in certain localities, showing that you have not yet finished the case, and that great congestion still persists. It is also a fact that the subjects of this picture

are usually dark in coloring, thin in figure, weak in appearance. The remedy must be differentiated as *iodine,* rather than phosphorus. Such people are almost always of the scrofulous type of constitution, hence get tuberculosis very easily and hence the necessity of a full appreciation on our part of the possible significance of such a picture. Now iodine is another prophylactic against tuberculosis. Its utter exhaustion from going up a slight ascent or from slight exertion—not from physical weakness, but from breathlessness and palpitation due to a lingering pulmonary abnormality points it out. Just as arterio-sclerotic changes indicate just beginning; and revealing themselves by shortness of breath on going up stairs, without anything else in a man of fifty or more, point to *sumbul* as the thing we need. It makes the sclerotic "puffers" young again. It turns back their clocks.

It is not uncommon for us to have long lasting bronchorrhoeas, with moist coughing and very abundant expectoration after acute attack has passed, but not we think when the treatment of the acute attack has been along homœopathic lines. These cases have taken cough syrups. If you ascultate carefully you may find areas of consolidation. You may find a temperature towards evening. You may note a tendency to sweating easily on effort or during sleep. Pretty bad outlook, don't you think, and one that may scarcely be trusted to any of our palliatives? But we homœopaths can solve such problems, as you know very well. And sometimes the homœopath will cure such a case perfectly with his remedies, without knowing just how great a feat he has accomplished; that is, he cures the case without really realizing how serious were the physical signs present. But he cures it. Now we might mention three excellent remedies, such as *kali bichromicum, stannum or stannum iodide and pulsatilla.* These are unfortunately used sometimes without regard to the vital differentiating features, which after all are simple, and they, therefore, do not act as they will if we regard these differentiating features before we prescribe them.

Now *kali bichromicum,* says such an authority as Hughes, will follow a sub-acute catarrh down into the finer lung structures and cure it best of all, but really it will not do so, unless its differentiating feature is present. Therefore this is the thing we should watch for especially in prescribing it. No matter how loose the chest signs are, the sputum that really

comes up in kali bich. is moderate in amount and very difficult to get up because it is so *tenacious*. This is true no matter what its color. The 2x aids expectoration. Now *stannum* or the *stannum iodide* is quite different in its differentiating features. The chest sounds are very moist and loose and whatever comes up, comes up most easily and in large amounts of real pus. But the great thing to note is its overwhelming sense of real exhaustion which makes it almost impossible to walk even a short distance or stand, when the legs wobble and give way. They are so weak they can't talk.

And pulsatilla is again distinctly different too. The chest sounds are very loose and moist sounding and what comes up, comes up easily; it is pussy looking or greenish, but it *only comes up freely in the daytime*. One of its best differentiating features in my experience is the hard to describe, fatty or tallow like taste to its sputum when raised. This with depression of spirits and oppressed feelings in a warm room.

I go thus far into details to show that it is an interesting as well as a profitable occupation to strive for such finer differentiations. We have not had as much success from any of the ready to use tablets of terpine hydrate, heroin or chloride of ammonia. They are distinctly inferior to the differentiated single made to order prescription.

I see no reason why we cannot, with our remedies, prevent such a condition as suppuration of the lung. This occurs, as you know, on some previous inflammatory basis, and its symptoms are productive cough with purulent sputum; often foul. Some fever at different parts of the day. Its physical signs are circumscribed dullness on percussion, and the "circumscribed shadow" described by the radiographist. These symptoms and signs often lead to the diagnosis of phthisis or tuberculosis. The modern treatment is drainage, with 34 per cent. mortality. Now we have seen such clinical pictures clear up slowly under medicinal treatment and we are sure that all of you have seen the same thing.

A "FLU" EXPERIENCE.

BY

JOHN C. CALHOUN, M.D., PITTSBURGH, PA.

(Read before the Homœopathic Medical Society of Pennsylvania, September 16, 1919.)

MR. CHAIRMAN: I now will attempt to make good my promise of some time ago to give you a paper. As you all know about a year ago we had an epidemic, in reality in some places a scourge, *i. e.,* the influenza; so for my title I take "Experience with Influenza."

Early in October, 1918, we were getting a mild form of disease which seemed to be quite contagious, yet not until it became more severe did we realize that we were up against something.

When calls were accumulating at such a rate that there were not hours enough in the day to make them, something had to be done to get a short route to prescribing. For a time I was seeing from 75 to 100 persons a day. We had a scarcity of doctors due to war conditions and sickness of those at home.

I took a survey of my cases attended and tried to group them so as to make it easier to prescribe for them. Three groups would take in the great majority.

GROUP ONE.—When called to see patient, you found the following symptoms: Chilliness, followed by fever, usually 101 degrees to 102 degrees F., pulse 100. Face flushed, so tired they did not care to be disturbed by examination. There was general aching, loss of appetite, some coryza, coated tongue.

GROUP TWO.—In this the symptoms much the same only the pains were greater, complained bitterly of the headache, bone aching, and backache.

GROUP THREE.—Those taken down with severe chill, nausea or vomiting, temperature when you saw them of 103 to 105, pulse 110 to 120, the appearance of one coming down with pneumonia.

To group one I gave gelsemum.
Group two, eupatorim perfoliatum.
Group three, veratum viride.

Do not for one moment think that I got my remedies

down to the three just mentioned, but I did use them exclusively on my first visit.

For the cough that followed in a day or so, phosphorus gave me better results than did any other remedy, so phosphorus was the first choice for that condition.

Those that showed pneumonic symptoms on the second or third days, I gave bryonia. Fortunately I had but few pneumonias.

For those that had persistent night sweats after temperature became normal, calcarea carb. seemed to bring about desired results.

Would state that I did not lose a pregnant case, though several aborted during convalescence. Strange that those pregnant four or more miscarried.

I did not stop with the remedy for all the medicine given unless certain other conditions were carried out, would avail nothing.

Absolute rest in bed, plenty of fresh air, liquid diet (fruit juices, milk, broths); I insisted on lots of water and the fruit juices, preferably orangeade or lemonade.

Sponge bath when there was any one competent to give it.

Bowel movement daily.

No getting up until a return of normal appetite and two days of good eating.

THE INFLUENZA EPIDEMIC AS OBSERVED AT THE HAHNEMANN HOSPITAL OF PHILADELPHIA.

BY

CLARENCE BARTLETT, M.D., PHILADELPHIA.

Professor of Medicine, Hahnemann Medical College.

(Read before the Homœopathic Medical Society of the State of Pennsylvania, September 16, 1919.)

At about the time my clinical service at Hahnemann Hospital opened for the session of 1918-1919, there were admitted to my wards three patients, all of them young male adults, presenting about the same complex of symptoms of very recent origin. The illnesses had continued but one or two days prior to admission. Temperatures were high, ranging from 103 degrees to 104 degrees, followed a mildly remittent type

with evening exacerbations; pulse frequency was but little altered, the increase at most being less than 12 per minute. Leucocyte counts were low. Urine was slightly albuminous. All three patients presented the peculiar mental hebetude which characterizes the early stage of typhoid fever. Rose spots and enlargement of the spleen were absent. The negative Widal did not influence our opinion owing to the recent onset of the illness. We had no hesitancy in classifying the cases as typhoid fever, and ordering the stringent measures which we enforce in that disease. After from five days to a week, the fever subsided, and the patients were thoroughly convalescent. No new features were developed. We, therefore, had no hesitancy in admitting that the patients did not have typhoid fever. We would have been at a loss to account for the strange phenomena had it not happened that just as these patients were up and about the wards, similar cases were admitted, and within a few days more every available bed in the hospital was occupied. At the same time similar cases were seen in other hospitals and in private practice, and we then learned that the epidemic of influenza was with us.

During the epidemic period we treated 223 cases of what our records tell us was influenza. Of these 57 were among our nursing staff; the balance consisted of regular ward patients. Experience with the epidemic of 1889 and '90 had led me to believe that influenza need not be a serious disease if patients were but moderately careful. Our early severe cases had done well and we made the results in these our guide for all subsequent action. The volume of work devolving upon me necessitated the turning over of the nurses to Dr. W. R. Williams. The general rule was instituted that all nurses should be sent to bed with the first onset of fever, and kept there until it was believed that relapses were impossible. Under this rigid system, not one nurse was seriously ill; there was not a single complication among them, not even a mild broncho-pneumonia; and all made good recoveries. Their illnesses followed the typical with pyrexia, pulse disproportionately slow to temperature, low leucocyte counts (when counts were made) and mild bronchitic phenomena.

The ward cases were quite different. Of the 166 cases, there were only ten in which the physical signs of pulmonary consolidation more or less were absent. In other words, we noted that broncho-pneumonia was so generally present that

it might well be accepted as a part of the disease, and not as a complication. I was strongly of the opinion, as already stated, that influenza need not be a serious disease with but moderate attention to care, and so in each case, we made it a point to determine just how much attention our patients had had prior to admission. With but few notable exceptions patients had been negligent. Those who had been careful, were among the ten pure influenzas of the group.

In private practice, the illnesses were always typical, the broncho-pneumonias being fewer and less severe than in hospital. All of the patients, with but three exceptions, came under care during the first 24 hours, and these three were physicians. All of my personal private cases recovered. Not one has since had any sequelae.

The real tragedies of the epidemic did not develop with us until the end of the first week in October, when cases of broncho-pneumonia were admitted in rapid succession, many of them to die within a few hours after entrance. Well might conditions be called a merry dance with death. These cases were different from anything we had ever seen before. The general clinical features were those of broncho-pneumonia, but the physical examination seemed to suggest a diagnosis of the lobar type. Percussion dullness, however, though distinctly lobar in distribution was notable by reason of its irregularity in location and variability from day to day.

Our mortality from the influenza pneumonias was high, about 70 per cent. When one considers the condition in which patients were admitted this was not a bad showing. Some died within 24 hours of admission. Practically all had been grossly neglected. Many had continued at their daily occupations until forced to give up. The general state of affairs can be attested by the statement that on one day alone, no less than twenty-two patients died en route from their lodgings to the hospital.

Characteristic features observed were the following: (1) Many cases on admission presented clinical features that did not seem to call for any anxiety. Temperature, pulse and respiration were all within the bounds of safety. The patient's general condition appeared to be good; and then very quickly without assignable reason, there came a disarrangement of clinical phenomena, all three factors rose markedly, toxaemia developed, and the patient died within a few days thereafter.

(2) Many patients expectorated a dark greenish black sputum, which was characteristic. Most of these died.

(3) Up to a certain point patients exhibited a normal facies; and then there appeared a peculiar ashy complexion, difficult of description. This was soon replaced by a cyanosis which was general in its distribution. The discoloration differed from that ordinarily seen in other illnesses, and was the cause of one of the names given to the epidemic by the laity, namely the "black death." In neither hospital or consultation practice have I seen one patient recover after this symptom developed.

(4) There were cases in which the rational symptoms were strongly suggestive of lobar pneumonia. The patient exhibited onset with chill, rapid accession of temperature, and bloody expectoration, but the percussion and auscultatory signs of consolidation were wanting. These patients, as a rule, were quite sick; but did not share the high mortality rate of the frank broncho-pneumonias.

(5) Finally, there were instances in which the prominent clinical phenomena related to profound toxaemia.

(6) The remarkable fatality among pregnant women was noteworthy. An explanation of this fact has not been forthcoming. The mortality in this class of patients was about the same as elsewhere, namely 80 per cent.

After all, the practical questions include the prevention of the disease and its cure when it develops.

During the course of the epidemic, the measures in vogue included the isolation of the patient and the wearing of gauze masks by all of those who attended upon the sick. Special care was enjoined upon young adults, *i. e.,* subjects between the ages of 18 and 40. At Hahnemann the nurses were strict in attention to the masks, notwithstanding 57 were stricken. One of my fatal pneumonias was a patient of Dr. Simmons. This woman had been delivered but recently, had not been out of the house for two weeks preceding delivery, and so far as known, none of the relatives had been in contact with the disease. It would seem from this, as well as from numerous other instances, that precautions were useless. I have been told that certain towns in the far west, many miles from railroads were infected as badly as were the cities. If this fact is true, it would seem as though precautions against infection

are absolutely useless. My own personal opinion is that the epidemic exhausted itself after attacking all non-immune subjects.

The important thing in the treatment of the illness is to have the patient go to bed and stay there until all danger of relapse is passed. It is on this point that the most danger is incurred. Patients are apt to feel so comfortable that it is not unnatural to permit them to get up and go about the house. The febrile movement of the disease is so treacherous that the physician cannot depend upon the single thermometric examination made at the time of his visit, and can only assure himself of the entire absence of pyrexia when observations have been made at four hourly intervals. I would urge that patients be kept in bed until the temperature has been normal for three days.

The diet should be regulated according to the fever and the patient's appetite. The duration of the disease is such that it is not necessary to feed for strength. The best diet is what we may best describe as liquid and nourishing.

When symptoms of toxaemia are present, or if the case is moderately severe, the instillation of 5 per cent. glucose solutions in the rectum by the drop method is invaluable. The duration of the treatment must be governed by the physician's judgment. The solution should be permitted to flow at the rate of one drop per second. It may be continued for one hour on and one hour off; or the hourly administration may be made from 3 to 6 times daily.

The indicated medicines are few but good. The majority of cases do well on gelsemium or bryonia. Less frequently indicated remedies are aconite, veratrum viride, ferrum phos., kali bichromicum and hepar. The average case received gelsemium as indicated by the character of the fever and the associated toxic mental state. Bryonia was used more particularly for frank bronchitic manifestations, associated with chest and bodily pains. Aconite was prescribed for cases starting in with chill followed by high fever *with dry skin.* Kali bichromicum when the cough suggested laryngeal involvement. Ferrum phos. for cases in which the expectoration was blood streaked or even pronouncedly bloody.

When it comes to the treatment of the pneumonias, I feel that we have struck a dark spot in therapy. I have seen about

everything thus far suggested tried, and have not been satisfied that any of these measures is of any value whatever.

The severe cyanosis has suggested oxygen to tide the patient over. The ordinary method of administration by inhalation has always impressed me as useless, in fact, more as one calculated to create an impression of therapeutic activity rather than as a real life saving measure. We, therefore, resorted to the interstitial injections of oxygen as advocated by McCrae. I do not feel free to advise or condemn the practice. McCrae is sure that it has done good. I am only sure that it is not harmful. The idea is that we may create a supernumerary lung within the connective tissue of the body by injecting a sufficient quantity of oxygen into the subcutaneous tissue sufficient to raise a tumor about the size and shape of half a football. It usually takes about twelve hours for the absorption of the gas. The reasoning the practice is based upon is good. I think that with such hopeless cases in the future, I would resort to the oxygen interstitially, introducing it in about 3 or 4 foci probably 3 or 4 times daily. It certainly does no harm, and causes no suffering other than occasioned by the aspirator needle.

I am sure that the glucose enemata administered by the drop method do good especially when delirium, subsultus and other typhoid symptoms are present.

Of the serums that were recommended, but one appeals to me as of probable use, and that one was the injection of a serum prepared from the blood of patients who had recovered from the post-influenzal pneumonias. We accomplished little or nothing in our cases by this remedy, possibly because the patients were in practical extremis at the time of the administration; possibly also because there was no assurance that the type of pneumonia from which the patient was suffering was not that of the donor of the blood from which the serum was prepared.

During the course of the epidemic, I have seen atropia, digitalis adrenalin, pituitrin, aspirin, phenacetin, and indeed many remedies prescribed, and I am not satisfied that any one of them was of the slightest avail. It is comforting to learn that others feel the same way as I do about it. The best results were obtained from ferrum phos., hepar, rhus, bryonia and baptisia. The fact that many patients died does not prove the unwisdom of these therapeutic suggestions. If the re-

sults were not ideal, those from other treatments were worse.

In closing this paper I take pleasure in acknowledging the valuable services rendered in our wards by Dr. R. D. Webb, the medical interne, and by Dr. J. C. Humphreys, who volunteered his services and remained on constant duty for three solid weeks.

I believe that we will have more or less of the influenza with us the coming winter, but I do not think that this should occasion any alarm. The disease is no more serious than it was in 1889, and so far as I can find out, is serious only among those who are careless. If the public would but depend upon fresh air, good rest, freedom from worry, and proper medications at the hands of a physician, I am sure that we would not be visited again by the holocaust of one year ago.

DISCUSSION ON INFLUENZA.

Dr. E. A. Krusen remarked that the last speaker had directed attention to the fact that we observed different types of cases according to environment or conditions. The physician who has a regular or established clientele is, as a rule, consulted early in the course of the illness, and is, therefore, enabled to secure excellent results. On the other hand, patients who enter the hospitals, generally defer treatment until their condition is so serious as to make attention imperative. In the poorer districts of our large towns and cities many people did not send for a physician until the illness had advanced to such a stage as to make the prognosis practically hopeless. When the patient sent for his physician early, it was nearly always possible to avert an oncoming pneumonia. The speaker said he had treated 692 cases with but five deaths. Of the latter three could have been saved in all probability had they had proper care in the beginning. Their histories showed that they had kept at their usual duties until they had become exhausted. One of the fatal cases was a pregnant woman, in whom the disease ran a progressive course until death supervened. Two of Dr. Krusen's cases were in parturient women, and both made excellent recoveries.

The remedies he had used were those mentioned by the essayists. He would lay special stress upon aconite, which appeared to be of unusual value in the recent epidemic. Patients responded to it within a few hours. If their symptoms were a little more sluggish, gelsemium was preferable.

He had had no experience with either glucose or oxygen as recommended by Dr. Bartlett.

His colleague, Dr. H. M. Bunting, had had about the same experience with the epidemic as had the speaker.

Dr. Henry F. Schantz, of Reading, asked if Dr. Bartlett always used the glucose solution by the drop method, and whether he had administered the remedy in other ways. In his experience with the epidemic, he had noted with remarkable regularity, the appearance of a peculiarly deep congestion of the soft palate with a relative anemia of the hard palate. He was inclined to look upon this early feature as of strong diagnostic value. He had seen but three cases that reached the cyanotic stage, and in them he used the normal saline by the so-called gravity method of Murphy.

As to remedies, he had had one case which did well on antimony and guaiacol. The balance of his cases were treated by the homœopathic remedies, with which he had supplied himself when he entered the service. He felt assured that his results were better than those obtained by such prescriptions as aspirin and synthetic drugs.

Bnt yesterday he had seen a case which had led him to ask himself the question, "Are we on the verge of another epidemic?" A young man in good physical condition, showed in the early part of last week, pharyngeal symptoms and the usual phenomena of acute rhinitis. He recovered sufficiently to go to his office, but after two days, he was taken down with pneumonia, and soon afterwards died. Men who had been in the service had a real advantage over others in handling recurrence, because they realize the danger of the coal tar products.

Dr. Jno. G. Wurtz, of Pittsburgh, said that he had but little experience with influenza. Seventy-five cases had been "posted" in the Pittsburgh hospital, and practically all of them showed what might be called a suppurative broncho-pneumonia. One of the cases had died following delivery. The condition was a pure broncho-pneumonia. He had had very little experience of value in the study of the micro-organisms of influenza cases. He had searched for pneumococci in the sputum, and failed to find all but type IV. Consultation with pathologists of the other Pittsburgh hospitals showed that with over 700 cases their experience had been the same as that of the speaker.

Dr. H. G. Carmalt, of Pittsburgh, spoke of a singular case in which the pathological findings were at variance with the clinical observations. Physicians had thought that the patient had a left sided pneumonia, but expressed a doubt as to the accuracy of the diagnosis. At the autopsy it was noted that the middle lobe of the right lung and the lower

portion of the lower lobe and the upper portion of the upper lobe were just as though the inflammation had been driven through with a shot gun and in parallel lines. The left lung was uninvolved.

Dr. Carmalt then directed attention to his experience with remedies. The patients among whom he practiced lived mostly on high ground. He had gotten no response from and very few indications for gelsemium. He had used considerable aconite with good results. In cases complaining of chilliness, especially when accompanied by nausea, nux vomica had been useful. In case showing hemorrhagic features, belladonna had proven useful.

Dr. Jno. C. Calhoun, of Pittsburgh, in response to the invitation of the chairman, said that he had nothing to add to the discussion.

Dr. Clarence Bartlett, of Philadelphia, in closing the discussion, first replied to inquiries made by Dr. Schantz concerning the ways of using the glucose solutions. Personally he preferred the drop method whenever it was possible to employ it. Some patients, however, are strongly opposed to it, and others are so restless that its use is impracticable. In all such cases it has been his practice to introduce a pint of a 5 per cent. or 10 per cent. solution of glucose as high in the rectum as possible, and repeat this from 3 to 4 times in the 24 hours.

Dr. Schantz had also raised the interesting question of the possibility of a recurrence of the epidemic this year, and has, furthermore, cited a case which shows that we do not know by half the many symptoms that may develop in the course of influenza. As to a recurrence, the speaker believed that it would come though in very mild form.

Dr. Schantz's description of an hitherto undescribed pharyngeal symptom reminded the speaker of a recent piece of literature bearing upon influenza. There is a certain hospital in this country which is famous for the remarkable attention it pays to all scientific details. In the recent epidemic, it was true to its reputation, and made every preparation for careful clinical study of the cases. One physician was on duty for every 25 patients, who were seen two or more times daily. Every physician thus had an abundance of time to study the disease and keep accurate records. They noted the frequency of influenza rashes, which neither the speaker nor Dr. Webb nor Dr. Humphreys had noted in a single instance. The mortality rate in that hospital was low, about 3 or 4 per cent. greater than our own in corresponding classes of cases. No medicine was prescribed. The speaker felt, however, that such pains-taking or pains-racking examinations as were conducted,

were not to the welfare of the sick. Patients have a certain right to be sick in peace and comfort. Such extravagant care reminded the speaker of the manner in which some people mend china. They apply the cement and place the pieces in apposition and then every few minutes they return to see whether the parts are sticking.

FACTORS IN THE PROGNOSIS OF CHRONIC INTERSTITIAL NEPHRITIS.

BY

WILLIAM VAN BAUN, M.D., PHILADELPHIA, PA.

Professor of Dietetics in the Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of Pennsylvania, Sept. 17, 1919.)

TWENTY years ago we believed chronic nephritis to be a steadily progressive, degenerative change with no intermission until death. We depended upon our general clinical knowledge of the disease and our few simple tests for our diagnosis and prognosis. We were confident that fixation of the specific gravity of the urine was important evidence of nephritis. We soon understood that the specific gravity of the 24 hours' urine was vastly more significant than the specific gravity of particular specimens passed at different times of the day. We found that in health the specific gravity of the total 24 hours' mixed urine is practically never very low. When we got a record showing low specific gravity over a number of days, it suggested at once some type of nephritis, diabetes insipidus, or some sort of polyuria induced by excessive drinking of water or restriction in the amount of solid food. This we recognized as a valuable guide, helpful in our prognosis; it was simple, easy and quick, differing from most of our modern tests, which are impracticable for ordinary purposes.

The advent of the phenosulphonephthalein test for kidney efficiency, devised by Rowntree and Geraghty, we looked upon as a great advance for accurate diagnosis and correct prognosis in kidney conditions. With the assistance of Dunning's colorimeter, the test is simplicity itself. It depends upon the injection into the tissues of a dyestuff, which is eliminated rapidly by the normal kidneys and can be easily estimated quantitatively in the urine. The dyestuff is non-irritative to the body either when taken by mouth or when injected into the

tissues, so that it does no harm to an already weakened kidney.

The amount of drug eliminated normally is 40-60 per cent. during the first hour and 20 to 25 per cent. during the second hour, or a total of 60 to 85 per cent. for two hours. The amount of drug excreted is independent of the quantity of urine obtained.

The demand of this age is for exact reliable methods and positive results. The tests that survive are the simple ones that the practitioner can use at his office or by the bedside. Here was a real opportunity and one of our energetic drug houses, Hynson, Westcott and Dunning, Baltimore, Md., commercialized it by standardizing the test and reduced it to the simplicity of giving a dose of anti-toxin and we were all prepared to prognose kidney conditions without reservations. If the drug elimination fell to 20 or 30 instead of the normal 60 to 80 per cent., the death certificate was in sight. With wider observation we found nephritic patients behaving queerly according to our earlier standards. First, we discovered some cases excreted all the drug during the first hour, then there were others that excreted a larger per cent. the second hour than the first. Then the impishness of nature commenced to get in its work and when we were all sure life could not be long sustained if the combined two hours' secretion dropped to 15 to 20 per cent., we were compelled to change our well established rule of prognosis by a complete reversal, and we now joyfully accept the dictum; that long life is compatible with low renal function even when the kidneys have reached an advanced stage of degeneration.

Five years ago no one would have claimed the possibility of a stay in the progress of chronic nephritis with the renal function near zero. Now, O'Hara reports cases at the Peter Bent Bringham Hospital, Boston, living three, four or more years with the renal function of only 12 per cent. to zero. He reports: One woman of twenty years—the "phthal" secretion fell to zero and stayed there for eight months, until her death He also cites the case of a man over 60 years where for five years the phenolsulphonephthalein secretion was never over 14 per cent. and most of the time much nearer zero, and that the blood urea nitrogen was consistently four or five times the average normal. The necropsy showed general arterio-sclerosis with two very small red granular kidneys. These cases are

cited simply to emphasize the point that prolonged existence is possible with an exceedingly small amount of renal tissue and an extremely small renal function. They simply are exceptions to the rule, and it is wise as soon as we discover a low renal function to turn for assistance and to the expert physiological chemist. The modern tendency is to judge the kidney function by the study of the blood, by seeing what is retained in the blood that ought to be excreted, at the same time we judge the question of acidosis which occurs in a good many kidney cases, though not constantly in any type of nephritis. These blood tests are not practicable for clinicians; they cannot be done in your office or by the bedside like the tests for albumin and sugar. Here we must have the assistance of the well stocked laboratory and the expert chemist.

The first question is, what are they? The second is, how important are they? The first is easier of answer than the second.

Blood Analysis: Blood analysis opens up a wide field for research. The study of the composition of the blood under various normal and pathological conditions has received great impetus from the development of the methods for blood analysis which give interesting results which are not yet well understood. It has been noted that in chronic nephritis the principal change is in the urea and non-protein nitrogen of the blood, which may be greatly increased in uremia with the retention of these forms of nitrogen. There is also an increase in other individual nitrogenous components of the blood such as: Uric acid, creatinine, creatin, amino-acid nitrogen and even ammonia.

The blood may be normal in all respects and ready to perform its functions properly, but it will be unable to do so if its alkalinity is below normal.

The alkaline reaction of blood is due to the presence of carbonates. The degrees of blood alkalinity in health is regulated by the proportion of the phosphates to the carbonates; phosphates being acid, carbonates alkaline, in reaction. In health the carbonates always exceed the phosphates in amount and should stand 75 to 50 per cent.

Acidosis is that condition in which the blood alkalinity is reduced below 50 per cent. The importance of blood alkalinity to the practitioner of medicine has been ably presented in the June, 1919, Hahnemannian Monthly, pp. 353-356, by

one of our brilliant original research men, Henry Allen Higley, M.D., Brooklyn, N. Y. To intelligently handle cases of nephritis it is necessary to know the per cent. of blood alkalinity.

Phosphoric acid should be excreted by the kidney and its retention indicates serious failure of kidney function. The normal figures are 6-10 mg. per 100 c.c. of blood. It is claimed that phosphoric acid as a retention product in the blood of nephritic cases arises only in the very severest terminal stages of uremia. The non-protein nitrogen goes up early. Phosphoric acid does not go up until the last moment, and when it is high death is imminent.

The carbon dioxide tension is measured in relation to the question of acidosis.

We cannot put a piece of test-paper into the blood like the simple, effective way with the urine, so the acid of alkali in the blood is measured only in an indirect way. The standard and most satisfactory way is to see whether the alkali reserve of the blood is diminished. If so, it means the acid is increased.

The CO^2 tension is measured in milligrams of mercury exactly as in blood pressure work. The normal figures are 35-38 mm. hg. The CO^2 tension diminished to 29 means acidosis. If the alkali reserve goes down the acid goes up.

The direct method for testing the alkali reserve—measuring the carbon dioxide capacity of the plasma as suggested by Van Syke and Cullen, is difficult and complicated and requires the expert physiological chemist.

The indirect method for testing the alkali reserve by the alveolar carbon-dioxide; Friderica's method is also troublesome. A modification by Dr. W. McKim Marriott has been put on the market by Hynson, Westcott and Dunning, a complete apparatus with all the other accessories, in a small package at a reasonable price, that brings this test within reach of all, and can be used either at the office or by the bedside. It is not as accurate as the usual blood and urine methods, nevertheless it is a valuable help and should be in general use.

These blood analyses offer very much more. They are intensely interesting and expensive—justly so from the time and skill required to make them accurately. Their present value in forming a diagnosis and prognosis in kidney cases is problematic. Their future promise fills us with great hope. Today if any patient cannot afford to have them done, I have

no regrets but fall back upon our old reliable clinical methods of the past thirty years.

The object of a correct prognosis in nephritic cases is to weigh well in the balance all the factors entering into it and their bearing on the successful treatment of the cases. Experience has taught us all to be extremely circumspect. This is not the place for undue optimism.

Successful treatment of nephritis calls for the fullest confidence of our patient. They must share with us a full knowledge of their case, the diagnosis, prognosis and the general plan of treatment. They must be taught that chronic interstitial nephritis is not a disease of the kidneys alone, but also of the heart—blood vessels—lymphatics and many other tissues all closely interwoven and inseparable, and that death is frequently due to causes not essentially nephritic but to other conditions like cardiac failure and infection.

The expectancy of life in interstitial nephritis may be measured by three possible terminations:

First—The factors that are really entirely extra-renal; "heart failure," apoplexy and intercurrent infections, are those usually met.

Second—Some cases of chronic Bright's disease die of uremia before the renal insufficiency can be more than a contributing cause. The uremia being a toxemia of unknown origin.

If the patient is successful in working by these first and second factors, there is always an ever increasing renal insufficiency due to persistent kidney degeneration which will sooner or later insidiously cause death.

DISCUSSION.

Dr. William Steele, of Philadelphia, said that the one thing that should impress all of us respecting chronic interstitial nephritis was its insidiousness. It is a chronic condition from the beginning and as was said in the paper, is associated with arterio-sclerosis in various portions of the body, but especially in the brain. The diagnosis of the condition is seldom made sufficiently early, because physicians are too frequently led to suspect the illness to be one of neurasthenia. Nervous symptoms are especially prominent among the early features. Their true nature would be recognized more frequently if physicians but took the trouble to make observations as to blood pressure.

Excluding certain cardiac diseases that give high blood pressure, the presence of a persistent high blood pressure in a patient with these neurotic symptoms should suggest the probability of an interstitial nephritis. Unfortunately, the disease is too often diagnosed only when symptoms of uraemia or internal hemorrhage appear. Then it is too late to do the patient any good.

Dr. Clarence Bartlett, of Philadelphia, said that Dr. Van Baun's paper had covered the subject so completely that it was impossible to elaborate on it. Furthermore the paper paved the way for many additional thoughts. Dr. Van Baun had spoken of the dissociation in the impairment of the various renal functions, as the elimination of water, the salines, protein substances, etc. We have applied the inability of the kidneys to eliminate salt to the treatment of our nephritic patients, in that we now place our hydropic cases on salt-free diets with excellent results.

Dr. Van Baun further made a remark in his paper that caused some strong murmurs of approval in the audience, namely that a long life is perfectly consistent with greatly lowered renal function. We can all testify to that. We have seen patients who have had such a low renal function that we have felt that we were justified in predicting death within a short time, and yet who have lived from five to fifteen years thereafter. On the other hand, we have observed cases with high phthallein excretion who have died unexpectedly within a short time from one of the complications of chronic nephritis.

Dr. Bartlett said that nothing is so incurable as chronic interstitial nephritis. Up to a certain stage it can be managed, but it must be managed with sense. We have done much damage in the past in trying to manage these cases on mere theory. Damaged kidneys, of course, cannot take normal care of nitrogenous waste, and then forthwith we proceed to place the patient on a limited diet incapable of maintaining the health. For two years past, the speaker had relied for the dieting of these patients upon the dietetic tables of Chace, of New York, as published in a New York number of the *Medical Clinics of North America,* and had been favorably impressed with his results.

High blood pressure is a subject concerning which we might all have something to say. Years ago Clifford Albutt spoke of high arterial tension without ill-health. He called such cases hyperpiesis. At the present day we are inclined to look upon all cases of hypertension as due to beginning renal disease or arterio-vascular changes. It would seem that there are some few cases in which high blood pressure persists for

years, the patient remaining absolutely healthy. It is safe practice to look upon high blood pressure as being something else than a mere idiopathic condition. It should be accepted as having a meaning.

High blood pressure as a study is all right if left to the physician; and all wrong if left to the public. We are now being treated to the spectacle of patients exhibiting certificates of blood pressure; we have seen them worry over the same. The mental state in which patients are thrown by a knowledge of blood pressure and of vaso-dilator drugs is unfortunate. In many instances, perhaps in most of them, high blood pressure is a conservative process. If such patients are treated by the vaso-dilators and the blood bressure lowered thereby, they generally feel badly in consequence. High blood pressure should be treated according to the patient's condition so far as medicines are concerned; while the general therapy should be dietetic and the condensation chair of the high frequency current.

We wonder why patients with interstitial nephritis die, and we say in reply, "uraemia." As a matter of fact uraemia is the rarest cause of death from chronic nephritis. One of the most common causes is secondary or terminal infections. Dr. Van Baun also referred to acidosis. We made some interesting observations covering this point within a few weeks when testing salivary secretion, finding the saliva quite acid in the severe or advanced cases.

We have seen patients live a long time on as low a renal function as 5 or 6 per cent. Years ago, John Rose Bradford demonstrated that a person could remain in good health with about one-third of the normal renal structure remaining.

Dr. Van Baun in closing said that he would add nothing to his previous remarks other than to emphasize the possibility of a long and useful life in the presence of quite low renal function.

Focal Infection and Herpes Zoster.—Both clinical and experimental evidence is accumulating in substantiation of the view that herpes zoster is due to localized infection of the ganglion of the nerve involved. As early as 1906 Everett S. Lain, of the Oklahoma Medical School, commented on the possibility of focal infection being an etiological factor in herpes zoster. The results of the experiments made by Rosnow in 1914 showed that herpes zoster could be produced experimentally in animals. Lain also reports a series of six cases in each of which there was alveolar or tonsillor infection.—*Prac. Med. Ser. and Jour. Cut. Dis.*

PREVENTION AND PROPHYLAXIS OF CARDIAC DISEASE.

BY

G. MORRIS GOLDEN, M.D., PHILADELPHIA, PA.

Clinical Professor of Medicine, Hahnemann Medical College of Philadelphia.

(Read before the Homœopathic Medical Society of Pennsylvania, September 16, 1919.)

THE study of vital statistics shows a rapid increase in cardiac disease, with also a steadily increasing mortality, while the death rate of disease in general is greatly decreasing with the lengthening of the expectancy of life. To prevent tuberculosis we attempt to recognize it in its incipiency, and thereby control the disease from a clinical standpoint. Hence it is just as much our duty or more so, to recognize cardiac disease in its incipiency and prevent that catastrophe which is claiming so many victims under the name of heart-failure. In the light of modern knowledge, a campaign might be waged on behalf of the cardiopath which would result in astonishing results, not only in respect to the lengthening of the average life, but to materially prevent or retard the course of cardiac disease.

In this brief consideration, the writer will consider the important factors in relation to prevention and prophylaxis.

Probably the most important factor in prevention is the knowledge that a great percentage of cardiac disease is the result of infection. The two infections largely responsible for cardiovascular disease are acute rheumatism and syphilis; the former producing chiefly mitral disease of the acute type and more active primary types of myocarditis and pericarditis in infancy and the early decades of adult life; and the latter exerting its effects chiefly upon the aortic valves, arteries and myocardium, in adult and later life.

The second type of infection may be classed under those termed focal. The most important of these is that of the chronically diseased tonsils, and we must attribute a large majority of our cases of acute rheumatism, and thereby a large proportion of cardiac disease of the juvenile type to this factor.

As a result of later investigations oral sepsis has been proven to be a factor in many of our obscure cases of cardiac

disease, in which hitherto we have been unable to find a definite cause. In fact, it is remarkable from study of this point the many and numerous obscure clinical conditions that may be attributed to infections about the teeth. Although such teeth may appear apparently sound, yet it is only through careful X-ray examination that these factors may be elicited. Hence we may gather from this that frequent careful examination should be made of the teeth as a preventive measure.

Other seats of focal infections that must be kept in mind are those of the sinuses, chronic ear discharges, chronic appendicitis, intestinal auto-intoxication, pus tubes, neisserian infections, gall bladder disease, these all being possible sources of infection. In gall bladder disease, especially in those who have advanced past middle life, myocardial change is frequently present, and such patients stand operation poorly, and the writer has seen in four or five cases, death as a result of this factor.

More and more fully we are coming to realize the absolute necessity of safe-guarding the heart in other acute prostrating infections, such as typhoid, pneumonia, influenza and diphtheria. It is in this class of cases, that the prevention of permanent cardiac disease depends upon the ability of the physician to recognize during this illness, the less obvious signs of cardiac involvement. The most important of these is the question of the integrity of the heart, and absence of minor dilatation, with few physical signs.

The recognition and the rational treatment of these prime generators of heart disease must greatly diminish its prevalence in the future.

The second means of prevention is the recognition of the early subjective symptoms of cardiovascular disease. At intervals, for long periods before the grosser signs of cardiac disease appear, periods of minor insufficiency evidently arise. It is due to these early changes that other symptoms arise. These demand precisely the same attention as the early symptoms of tuberculosis and by a study of these symptoms minor dilatations may be detected.

It is at this stage that the general practitioner, if he will by systematic study of his case, be able to gather, recognize and systematize these symptoms. It is the specialist who sees cardiac disease in its late stage, and when gross changes have taken place. No less authority upon the heart than Sir

James McKenzie started his study in this way, and it is largely due to him that the value of the early symptoms in diagnosis may be attributed. These subjective symptoms are the most varied in type. The symptoms of cardiovascular conditions may be partially or wholly referring to the upper abdomen. As has been stated, the old rule said that when a patient complains of his heart, his stomach should be looked to. We should probably reverse this and say that when a patient complains of his stomach, his heart should be looked to. Pain of cardiovascular origin may be most intense griping, clutching, or a sense of crowding of the heart. A rather common and misinterpreted sign is that of tenderness over the region of the heart, usually regarded as a nervous symptom. This is frequently associated with minor dilatations, acute in character. Closely associated with this symptom is that of globus hystericus, or a sensation of a lump at the upper end of the sternum or in the throat. This may occur in minor insufficiency. I have seen this sign disappear under rest and digitalis.

Of the gastric disturbances these are frequently conveniently placed in the class of so-called gastric neurasthenias. The diagnosis of neurasthenia, especially gastric in type should always have a careful examination of the cardiovascular system. In fact the writer has come to the conclusion that a diagnosis of neurasthenia is a dangerous one, for it is evident that it is often the early manifestations of organic disease occurring especially at middle life.

At the same time do not misunderstand; there are cases in which a logical diagnosis of neurasthenia is proper.

Other symptoms that appear very commonplace, but should attract the attention of cardiac examination are various disturbances of sleep, persistent day-drowsiness, changeable disposition, loss of power of concentration, mental confusion, physical fatigue under slight exertion, numbness, increase of susceptibility to cold. Dyspnoea may be an early manifestation but is not recognized as such. It may be a mere sense of respiratory discomfort, sense of stuffiness, or tendency to sighing, probably evidence of air hunger, and inability to hold the breath.

The most important primary and cardinal symptom of minor dilatation is the limitation of the cardiac reserve power, or what is known as the field of response. Various tests have

been advised for the approximate estimation of this field. The writer has found Traupner's Test, or the reaction of the blood pressure to a measured amount of work, the most valuable aid in the early detection of cardiac diseases.

Thirdly. Physical signs.

It is a well-known fact that organic change may exist without definite physical signs. Of the early physical signs showing heart-failure, probably the size of the heart is the most important. As the result of investigations by Moritz, von Tabora, and Veith, it is seldom that the transverse diameter of the heart exceeds 13.5 centimeters. In one who marks 13.5 centimeters as a maximal diameter upon a normal chest, will realize that formerly a great number of pathologically enlarged hearts have been passed as normal. For determining the cardiac outline, I would advise auscultatory percussion in conjunction with the old flat-fingered method.

In fact, it is my custom to use the old time percussion and check by means of the auscultatory method. This method produces accuracy and in conjunction with the Roentgen ray examination, we have a proper check upon percussion in outlining of the heart, and determining minor enlargements.

An important physical sign of early myocardial change is the shortening of the first sound of the heart as heard at the apex. It is this sign of shortening of the first sound upon which one should lay great stress and not the muffling or weakening of the first sound which is often misinterpreted for shortening.

In association with this shortening of the first sound, frequently a sense of crepitation or roughness of the first sound may be heard at the apex. At times this may be vibrating in character, heard over the whole cardiac area and during the whole respiratory cycle, and not at end of expiration as is common in reduplication. These adventitious sounds may be mistaken for mitral stenosis but careful attention of the foregoing points will differentiate it.

It is time the medical profession should awaken to the fact that when gross symptoms of heart-failure present themselves that it is the end result of previous factors working over a prolonged period.

Hence it is our duty to attempt to recognize cardiovascular changes in their incipiency and prevent what may be a harmless condition becoming a dangerous clinical disease.

The laity should be instructed upon these lines and urged to have frequent, competent and thorough examination of the cardiovascular system from time to time in order to prevent this catastrophe. There is a class that may be termed the silent heart in which we frequently hear the statement that such a person died of acute indigestion. These are cases of cardiovascular disease in which organic change was well marked and the danger signs and clinical symptoms not heeded. If careful examination had been made of such cases no doubt the presence of heart change could have been demonstrated. The application of these few thoughts by the general practitioner, if carried out conscientiously, will reveal many cases of cardiac disease unsuspected and just as we attempt to diagnose tuberculosis in its incipiency, let us attempt to recognize cardiac disease in its incipiency, and control, retard or possibly cure the failing heart.

As has been stated by a certain writer: "How ripe and attractive the field is for fine diagnosis and beneficient practice in the art of saving and prolonging lives to comfort, usefulness, achievement and general betterment."

HOMOEOPATHIC REMEDIES IN SURGERY.

BY

H. L NORTHROP, M.D., F.A.C.S., PHILADELPHIA.

Professor of Surgery in the Hahnemann Medical College of Philadelphia.

(Read before the Philadelphia County Homœopathic Medical Society.)

First.—Homœopathy is a powerful adjunct to the practice of surgery.

Second.—The application of the homœopathic remedy in my hands has repeatedly postponed, either temporarily or permanently, a surgical operation.

Third.—During the past twenty-five years, I have known the homœopathic remedy to have aided materially, many times, to clinch and complete a cure following a surgical operation.

Fourth.—I, personally, enjoy the reputation of prescribing more homœopathic medicines in Hahnemann Hospital than any other surgeon on the staff of said hospital.

First.—Homœopathy is a powerful adjunct to surgery. I believe that the surgeon who possesses a knowledge of homœopathic materia medica and applies that knowledge, has a combination hard to beat. I am convinced that he must, other things being equal, get better results, get them more quickly and lead his patient over a shorter, a more direct, a smoother road to health than the surgeon who has no knowledge of homœopathy, or, if he has, does not employ it, but relies upon his "aseptic scalpel," his mechanical purging and depleting, his brow-beating, sledgehammer doses of alteratives, tonics, stimulants and depressants. In other words, homœopathy is a valuable help-meet to surgery.

Second.—The application of the homœopathic remedy in my hands, (and in yours, too) has repeatedly postponed a surgical operation. Of course the patient rejoiced at this and so did the surgeon—he ought to be ashamed of himself if he did not—and I believe thereafter the surgeon was held in higher regard by that patient and he gained the reputation (a desirable one) of not "cutting" until he had to.

I have known belladonna, bryonia, nux vomica, silicea, mercurius, pulsatilla, hamamelis, and others to control inflammatory processes which were rapidly advancing to a serious degree and to surgical interference. Of course the general practitioner and the internist can multiply such cures as these many times. As a surgeon, I believe in postponing an operation if it can safely be done and if the cure can be wrought by means other than the knife; if medical treatment (Homœopathic remedies) and sane and sensible adjuvants offer a fair prospect of cure, without taking too great a chance or without running any greater risk than that incurred by operation, then by all means employ the medicinal method. Should the latter fail and the operation be ultimately necessary, the patient will submit to it with less hesitancy and with greater complacency than if surgery had been urged in the beginning. It is understood, of course, that many diseases are not, and cannot be, operated upon too early and that many general practitioners err seriously in trying to postpone or evade an operation. I cannot, under any circumstances, lend one bit of encouragement to such a reprehensible practice, for in many cases delay in operating is worse than dangerous—it is toying with death. Homœopathic medicines are invalu-

able in surgical diseases and homœopathic medicines have their limitations in surgical diseases.

Third.—The homœopathic remedy aids materially in hastening the cure after a surgical operation, and in preventing and controlling complications. And right now is where the attending physician gets in his good work, for, as a rule, he is better qualified to do the prescribing than the surgeon. However, many times the surgeon is thrown on his own resources and it has been a great pleasure to me to prescribe to the best of my ability, and I have often been delighted at the good effects of the homœopathic remedy.

Ipecac will sometimes act like magic in controlling nausea and vomiting after the operation, whether the gastric irritability be due to the anesthetic or to something else.

Bryonia is of great value when symptoms of peritonitis appear, and should be administered early and just as regularly as the proctoclysis, the purge or enema, and the Fowler position. It is also invaluable, and so is aconite, when sharp pains in the side or back of the chest indicate the onset of aeupturpleurisy or a pleuro-pneumonia.

Hypericum serves well after nerve trunks have been handled, stretched or bruised, and where a partial paralysis exists. Remember it in that paresis of the arm or hand where the patient has been inadvertently or unavoidably placed on the operating table, with the upper extremity under the body, producing a postural paresis. Use hypericum also for the pains caused by the entanglement of nerves in scars.

Graphites 30x, and apis, are splendid remedies in erysipelas which may follow a surgical operation and are also useful in those phlegmonous inflammations and infections which occur with more or less frequency.

Hiccough is sometimes a most troublesome complication, and although only a symptom, usually indicative of a septic condition and a low state of the vital powers, it nevertheless is very distressing to patient and relative, and demands special treatment. Hyoscyamus is frequently prescribed for it, or cuprum arsenitum if a uremic condition exists. Ginseng is a remedy which probably should be prescribed for hiccough more frequently than it is. I have known hiccough lasting for more than a week to yield to it completely in twenty-four hours.

The reputation of hepar sulphur in suppurating processes is well-known. Personally, I am inclined to believe its value to be overestimated. Perhaps I have fallen into a habit, and it may be a bad habit, of relying upon early incision, thorough curettage, adequate drainage, and local applications of a solution, such as saline, Burrow's, calendula, bichloride, or formalin. Silicia is a valuable drug in treating sinuses and fistulae, and is often of great efficacy in the night sweats of those who are debilitated. For the latter condition the thirtieth decimal dilution serves admirably.

Cliena sometimes covers itself with glory by the way it controls gas formation and encourages peristalsis after abdominal operations; and the compound tincture of cinchona is, to my mind, the best tonic that can be prescribed two or three weeks after operation for the average surgical case. I remember the late Dr. E. R. Suader advocated its use in these conditions.

In serious, advanced septic cases, with persistent vomiting (and possibly diarrhoera) arsenicnne album possesses considerable virtue. I have known it to work almost miraculously in several desperate cases of this kind.

I might continue indefinitely, mentioning remedies which are of value in surgical practice, but this is not an essay on materia medica.

Fourth.—I have stated that I prescribe more homœopathic remedies in Hahnemann Hospital than any other surgeon on the hospital staff. That is true, and I am proud of it. I am satisfied to rest my case on these laurels.

Lice and Skin Disease.—During the latter part of the war, Semon and Barber directed attention to the importance of pediculosis as a cause of skin disease in the army. Notwithstanding the fact that it has always been recognized that lice are at times the causal factor in impetigo and ecthyma, credit is due the above mentioned authors for showing that the army pediculus corporis sometimes deposits its ova on the pubic hair, and thus defeats antiparasitic measures directed only to the clothing and blankets; also for showing that the lesions and their distribution are sufficiently characteristic to enable a diagnosis of pediculosis to be made even in the absence of live parasites or ova. J. F. Smith substantiates the findings of Semon and Barber in his experience at another base hospital. Smith reports that in the last 4430 cases which came under his observation there were 1074 of scabies and 1120 of pediculosis, the latter in every instance carrying live pediculi or ova. He also had 919 cases of pyoderma in which the distribution of the lesions strongly leaned toward pediculosis but in which no absolute evidence was found.—*Prac. Medicine Series.*

EDITORIAL

THE DISPENSARY IN EDUCATION AND RESEARCH.

ANYONE who has had any experience in hospital and college management has felt the responsibility of obtaining suitable talent for the management of the dispensary side of the institution. Physicians one and all aspire to hospital appointments, and seem to be only too glad to avoid dispensary duty. The objection to out-patient service seems to be the difficulty of attending daily at a specified time to remain on duty until all work is done, and the lack of cooperation on the part of hospital trustees in furnishing physicians proper equipment and skilled assistance. Unless therefore cases happen to be of unusual interest, physicians are too apt to hurry through their work as more or less routine.

As a matter of fact the success of an institution depends very largely upon the care with which its out-patient is conducted. It is here that cases suitable for ward care are discovered and placed under treatment at a time when recovery is still within the bounds of possibility. The number of people who attend these services far exceeds those in the wards, probably by 20 to 1. Neglect therefore endangers the reputation of an institution just as efficient service rebounds to its credit.

Sir James Mackenzie * has recently in the course of some remarks on medical education taken up the cudgels on behalf of the dispensary as an educator. He says:

"What are the methods adopted to instruct students in early stages of disease? In the hospitals, where all instruction in clinical medicine is given, the patients in the early stages go to the out-patient department. Common sense would say that here, where the signs of diseases are the most difficult to make out, and the hope of cure is at the highest, the most experienced physicians would be employed, and that all the aids of laboratory technique would be at hand to help in the recognition of disease. In no teaching institution is this ever done. Here instead is placed the youngest member on the

* The Future of Medicine.—*Oxford University Press*, 1919.

staff, lacking in experience, ignorant of the meaning of signs, and incapable of eliciting them. He searches carefully for physical signs and if there are no physical signs, the patient is discharged with a bottle of physic or told to return from time to time until a physical sign is discovered; then, and not till then, is he sent to be under the care of the skilled physician; and then and not till then, does he receive the assistance of laboratory methods in his examination.

"On the other hand in the wards, where disease has advanced so far as to produce physical signs or other demonstrable signs of disease, mostly easy of recognition, we have the trained physician, the research student, and all of the paraphernalia of laboratory assistance.

"This description will be contested by some as an untrue or exaggerated picture of the way things are managed in some particular school or hospital and I admit that exceptions exist here and there; yet it is sufficiently accurate to be of use in focussing attention on the defects of medical education. I may say I have visited hospitals and medical schools in many countries. I have had shown to me with pride splendid pathological institutes, excellent wards with laboratories attached, complete with all kinds of mechanical devices and presided over by competent men who have demonstrated to me a great variety of apparatus for detecting some phases of disease; but I have never yet been asked to see an out-patient department, nor shown any place where attempts to study the symptoms of disease in its early stages, were being carried on."

Personally we feel that Sir James has been guilty of exaggeration in his criticism of dispensary management, but not in the least has he overdrawn the value of the dispensary as a place where the early stages of disease may be studied for the benefit of humanity; nor has he said one word too much respecting the ability required of the dispensary physician if he is to perform his duties properly. It is evident therefore that hospital and college authorities must give greater attention to the out-patient departments of their institutions. The Pennsylvania State Board of Licensure has already taken this matter in hand in a most practical manner, and now demands that hospital internes must receive adequate experience in dispensary service otherwise the hospitals with which they are connected will not receive recognition as "approved

hospitals" at which the medical student may complete his education, preliminary to entrance upon actual practice on his own account.

Much of the difficulty in securing proper dispensary service depends we believe upon insufficient facilities for studying disease. The length of time required to examine cases thoroughly and the limited hours which a physician can give to his institution also play an important part. The introduction of an adequate social service to help physicians in their investigations of disease, the furnishing of complete laboratory equipment, the employment of clinical clerks, and the addition of technicians, will go far towards removing the drudgery of out-patient work, and convert a staff of half-interested physicians into one that to put it mildly may be described as wildly enthusiastic.

We emphasize: A well managed out-patient service with special attention given to the betterment of the medical department of the same, is the best means of filling the hospital wards with the needy and truly sick. Unless the interests of the medical dispensary are furthered to the utmost, we can expect little or nothing in those departments of the institution devoted to surgery and the various specialties.

ADENOIDS.

The United States Public Health Service issues a pamphlet on Adenoids in its Keep Well Series which is intended to instruct the public regarding the important facts concerning adenoids. These are "What Are They?" "How to Recognize Them," and "What to do for Them."

Nature has intended that we breathe through the nose so that the air shall be strained, warmed and moistened before it reaches the bronchial tubes. Unfortunately in about 10 per cent. of all children normal nasal respiration is interfered with or made impossible through the presence of adenoids in the post-nasal space.

Adenoids are described in the pamphlet as follows: Nature has provided a kind of moist cushion in the post-nasal space which helps to filter impurities out of the air. This cushion is formed of what doctors call "adenoid tissue" and is similar to that which makes up the tonsils. When the adenoid

tissue grows abnormally large it forms what are known as "adenoids." From the position of these adenoids (as shown in a diagram) it will readily be seen how easily they interfere with proper nasal breathing.

What do Adenoids do? One of the first results of the growth of adenoids is mouth breathing. The results of mouth breathing are then detailed. They are repeated colds, nasal catarrh and pharyngitis, the voice is affected and children who suffer from adenoids eventually become pale, often narrow-chested and altogether are not as strong and robust as are normal children. Other effects noted in some cases are interference with hearing, disfigurement of the facial expression, night terrors.

A serious consequence of the maldevelopment of the upper jaw which frequently accompanies adenoids is irregularities of the teeth with consequent malocclusion. Pyorrhea and chronic indigestion may follow in the wake of this abnormality.

How to Recognize Them. The presence of adenoids should be suspected if the child habitually sleeps with wide open mouth, snores a great deal or has frequent strangling coughing spells. Difficulty in hearing is another early symptom.

Operation is advised in all cases in which the adenoids are large enough to give rise to any of the symptoms described, especially in children under 10 years of age. It is stated that the operation is a simple one and not dangerous; this statement is, however, not altogether correct. No operation is entirely without danger and the successful and safe removal of adenoids requires a certain degree of technical skill which is only possessed by the surgeon who has had sufficient training in the field of nose and throat surgery and who keeps himself in practice in this line of work. If the operation is not thoroughly done it is worse than useless and in the event of hemorrhage, a complication which is not common but which does occur at times, experience and skill are required to control the same. What has been said of adenoids applies with even greater force to tonsils. The removal of tonsils is a difficult operation and is beset with more danger than the removal of adenoids. These operations should not be lightly advised nor should they be entrusted to the hands of any but skilled surgeons.

The purpose of these pamphlets is a good one in calling

the attention of the public to the important matters affecting the public health. The family physician, however, is the one to advise when it comes to such matters as operations for the removal of adenoids and tonsils and he should take sufficient interest in the children under his care to watch for the earliest evidences of any physical defects and take them in hand at once. It is a humiliation and often an affront to the family physician to have a child sent home from school with a note instructing the parent to have the child's tonsils and adenoids removed, as sometimes happens. This advice is not always good or even justified; however, the family physician should not let himself be caught napping and leave it to some outsider to discover that his little patient really has adenoids and perhaps also diseased tonsils. C. S. R.

Clinical Observations for the Study of Inguinal and Crural Cystoceles.—A writer (*Jour. de med. et chir. prat.*, 1919, XC, 377) draws attention to the cystoles, with or without sacs, that may be found in the inguinal or crural region on operating for hernia. He gives the histories of three cases, two of which were of extra peritoneal cystoceles without sacs; that is, a kind of bladder hernia. Thinking that the cystocele was the hernial sac for which he was looking, he opened it, in one of these cases. The diagnosis of strangulated omental hernia had been made, and the true nature of the case was not known until a jet of urine shot through the incision in the cystocele. In the second case, the cystocele was thought to be a crural hernia involving the intestines. It was discovered while performing a radical operation for the cure of old inguinal hernia. The author's third case was a crural cystocele with an incomplete sac. This type of paraperitoneal cystocele is sometimes found in the inguinal region, especially in old men who have prostatitis or strictures, and in old women with abdominal tumors. The third variety mentioned by the author is the intraperitoneal cystocele, which is of very rare occurrence, and is always found in the inguinal region. The herniated bladder lies within an ordinary hernial sac, together with an intestinal loop or a portion of omentum, resembling a second sac within the first. The herniated portion of the bladder is usually connected with the remainder of the organ by means of a narrow pedicle, so that fluids injected into the bladder do not always enter the diverticulum. There are no typical symptoms on which to base a diagnosis of such a cystocele. Indeed, the symptoms of a cystocele are very much like those of an ordinary strangulated hernia, only less marked. The diagnosis is rarely made before operation. Even at operation, it may not be discovered until the bladder wall has been injured; and in some cases it is not found at all. The author, therefore, recommends that if the appearance of a hernia during operation is suggestive of anything unusual, a small exploratory puncture should be made with a Praves syringe.

GLEANINGS

MEDICINE

Conducted by Clarence Bartlett, M. D.

Syphilis of the Epididymis.—Michelson comments on this subject as follows: 1. Syphilitic involvement of the epididymis is not an extremely rare occurrence, and will be more frequently found if looked for. 2. Bilateral involvement is unusual. 3. The more common type is the chronic diffuse interstitial type. 4. Some cases of hydrocele are due to syphilis. 5. All patients presenting themselves for disease of the scrotal contents should be examined for syphilis. 6. The diseased portion is not necessarily confined to the upper pole, the entire epididymis being frequently involved.—*Journal of the American Medical Association*, November 8, 1919.

The Use of Calomel Inunctions in Syphilis.—Cole and Littman have made clinical studies on 54 cases of syphilis treated by calomel inunctions and have reached the following conclusions: 1. Calomel inunctions are almost totally inefficient against primary and secondary syphilis. 2. Calomel inunctions very rarely produce salivation and gingivitis. This means poor absorption of the mercury and explains the therapeutic inefficiency. 3. Calomel rubs may occasionally produce a dermatitis. These results have led the authors to abandon calomel inunctions and we should strongly advise against their further use in the treatment of syphilis.—*Journal of the American Medical Association*, November 8, 1919.

Leucocyte Count in Epidemic Influenza.—Beverly Douglass made a study of the Leucocytes in Epidemic Influenza at Johns Hopkins Hospital. the results of which were the following general conclusions:

Leucopenia is the rule in epidemic influenza, although a few cases may show a normal count or a slight leucocytosis.

The leucopenia frequently is present on the first day of the disease, after which it may become more marked for a few days, with a subsequent gradual tendency to rise until the normal mark is reached. In some cases the normal mark is overshot during convalescence, and leucocytosis may be present.

There is no constant relation between the leucocyte count and the severity of the disease.

The persistence of the leucopenia is the rule, even when broncho-pneumonia, fatal or non-fatal, supervenes.

Differential count shows an absolute relative decrease in polymorphonuclear cells, as well as during the stage of leucopenia, varying to some extent with the total count.

Acute non-influenzal respiratory infections are accompanied, as a rule, by a leucocytosis.

A leucopenia is, therefore, a reliable diagnostic sign in epidemic influenza. —*Johns Hopkins Hospital Bulletin*, November, 1919.

Function of the Thymus Gland.—Blatz has reviewed the recent literature bearing on the functions of the thymus gland, and believes that it is clear that it is impossible to attribute any function to this structure. The work of Hammar, who has recently made an exhaustive study of the thymus gland function both clinically and experimentally concludes with the remark that in his estimation, the thymus is not an organ of internal secretion. And E. R. Hoskins considers that the thymus functions as a lymphoid organ in infancy and childhood when a large number of lymphoid cells and leucocytes are needed to combat infections; a view which is upheld by a comparison of the graphs showing the curve of involution of the thymus. These closely approximate the curve of the decrease in the number of lymphocytes in the blood with increasing age. Elsewhere the author states that whatever the real function of the thymus, certain it is that its production of an internal secretion has not been proved. If we might be permitted to express an opinion, we would suggest that the thymus is a lymphoid organ, like an enlarged tonsil, which involutes when its presence is no longer necessary. —*Journal of Laboratory and Clinical Medicine*, November, 1919.

Aortic Regurgitation and the Wassermann Test.—Authorities have all contended that uncomplicated aortic regurgitation is commonly syphilitic, and that a case of rheumatic origin, though possible, is rarely observed. The observations of Benjamin and Havre among the recruits at Camp Funston as showing otherwise, are of unusual interest. Thirty-three cases were discovered in 44,018 recruits, of whom 11% showed positive Wassermann reactions, and in each instance the history of syphilitic infection was conclusive. In the remainder, the evidences of rheumatic fever or tonsillitis being the cause were satisfactory. The average age of the subjects was 24 years; the maximum, 31 years; the minimum, 21 years. Two of the syphilitic cases occurred at these extremes. None of the patients were aware of the difficulty until told of it by the physicians.—*Journal of Laboratory and Clinical Medicine*, November, 1919.

(The results obtained by Benjamin and Havre are rather astounding in view of the experience of physicians in civil practice. I have found the history of a syphilitic infection so regularly in my private and hospital cases of uncomplicated aortic regurgitation that I have come to regard the causal relationship almost certain. The conclusions of the investigators cannot be disputed because of their failure to take spinal Wassermanns. The clearly defined histories of rheumatic histories prevent such a stand. Rather would I explain the discrepancy on the basis of the different character of subjects with whom they had to deal. Furthermore, the clinical aspects of the lesion, though declared negative by the investigators, would certainly bear analysis. —C. B.)

PATHOLOGY.

Conducted by Jno. G. Wurtz, M. D.

The Production of Bright's Disease by Feeding High Protein Diets.—The degree of renal injury produced by nephrotoxic substances depends largely upon the concentration of these substances in the blood. While therapeutic doses of mercury usually cause no detectable effect on the kidney, if long continued albumin and casts may appear. When taken in large amounts, in the soluble form, acute fatal nephritis may result. Applying

this principle to proteins, Newburgh (*Arch. Inter. Med.*, October 1919, p. 359) experimented with rabbits, feeding them egg white, casein and soy bean. He noted that renal injury was very quickly and constantly produced in rabbits that ate several egg whites daily and that prolonged egg white diet caused acute and subacute nephritis. While 15 grams of casein daily caused no demonstrable renal lesion, 30 grams had a marked deleterious effect upon the kidney. Months of soy bean diet regularly produced chronic nephritis. The author concludes that the renal injury in high protein diet is at least not due to too much urea passing through the kidneys.

The Action of Radium Emanation on the Vitamines of Yeast.—Sugiura and Benedict (*Jour. Bio. Chem.*, October 1919, p. 421) give a brief review of the work of others relative to the chemical and physical effects of radium, and also the effects on animals, plants and enzymes. These writers detail their experiments and conclude that the "growth-promoting factors in yeast may be inactivated partially by means of exposure to radium emanation." They suggest that the possible therapeutic effect of radium upon neoplasms may be due in part to this destruction of growth-promoting substance.

Vaccination by Subcutaneous Injection.—Major Goodall has tried vaccination by subcutaneous injection in 6000 cases in the camps, and hal reached the following conclusions concerning its value: 1. It is a clean surgical operation. If untoward results develop, they are due to faulty technique. 2. There is no open wound, and therefore dressings are not required. 3. Dangers of secondary infection are practically eliminated. 4. The percentage of positive reactions is relatively high. 5. In only a very small percentage of cases, the local and general reactions caused complete incapacity. 6. It is painless as compared with scarification. 7. Children undergo the hypodermic vaccination without any difficulty, owing to the rapidity with which the injection is carried out.—*American Journal of Medical Sciences*, November, 1919.

Experimental Emphysema.—Kelman (*Arch. Inter. Med.*, September, 1919, p. 332) observed that in twenty cases of influenza and bronchopneumonia that came to necropsy there was constantly present an emphysema. In order to determine if possible the cause of this finding, experiments were done on laboratory animals. It was found that interstitial emphysema both in the experiments and in the fatal cases of postinfluenzal bronchopneumonia is a result of the escape of air from the lungs, preceded by a marked vesicular emphysema. The toxic action of the virus on the lung parenchyma causing a marked weakening of the alveoli and the toxic action on the respiratory center producing dyspnea and cyanosis are responsible for the emphysema. The emphysema in turn increasing the dyspnea and cyanosis.

The Preservative for Wassermann Reagents.—Emerson (*Jour. Lab. and Clin. Med.*, October, 1919, p 62) suggests the use of chloroform as a preservative for Wassermann reagents. Alcoholic antigens need no preservative and complement is best used fresh. However, red cells, serum and amboceptor keep much longer if a few drops of chloroform are added to them. The author further suggests that serums sent to the laboratory should first be separated from the clot and have added to them a few drops of chloroform before mailing.

PAEDIATRICS

Conducted by C. S. Raue, M. D.

The Results of Thymus Extirpation.—The relationship of the thymus gland to rickets has been a matter of speculation for some time since the claims made by Matti that rickets occurred in thymectomized dogs. Park and McClure in a report on their experiments upon dogs (*Amer. Jour. Diseases of Children*, November, 1919) come to the following conclusions:

The thymus gland is not essential to life in the dog.

Extirpation of the thymus produces no detectable alteration in the hair, teeth, contour of the body, muscular development, strength, activity or intelligence of the experimental animal.

Extirpation of the thymus probably does not influence growth or development. The possibility that it may cause retardation in development and delayed closure of the epiphyses, however, cannot be excluded absolutely.

Extirpation of the thymus probably produces no alterations in the organs of internal secretion. It is possible that it produces well marked changes in the organs of internal secretion in the period immediately following thymectomy which was not covered in our experiments.

Pyelitis in Infancy.—The subject of pyelitis in infancy was discussed by C. S. Raue at a meeting of the Clinico-Pathological Society, Nov. 6th. The importance of suspecting pyelitis as a possible cause for an obscure fever occurring in infancy was dwelt upon. The diagnosis must frequently be made upon the urinary findings alone as bladder symptoms may be entirely wanting. If a thorough examination of the infant fails to detect a possible cause for the fever in the lungs, abdomen, nose and throat or ears, we should suspect pyelitis and obtain a specimen of urine for examination.

The following case was reported in illustration:

Baby G.—age 14 mos., female, maternal nursing until 10 months. The infant had been in good health until the time of onset of the present illness. The present illness began two weeks ago with fever, offensive stools containing mucus; loss of appetite and fretfulness. The fever ranged from 102.4 to 104.4. Examination of the lungs, abdomen, nose and throat and ears did not reveal a cause for the fever. A fresh specimen of urine was obtained which was slightly cloudy, acid and showed a trace of albumin, a few hyaline casts and an abundance of pus cells. A gram negative bacillus was also present. This was suspected of being the colon bacillus and a culture was made from a catheterized specimen of urine. The colon bacillus was isolated in pure culture. An autogenous vaccine was prepared and after the first injection the temperature became remitting and reached normal in the morning. The leucocytes gradually fell from 46,000 to 20,000 and finally reached normal. After the third dose of vaccine the temperature remained normal. Beside the vaccine the child also received cantharis 6x. The urine gradually cleared up and at the end of a week after treatment was begun it was clear, only showing a few pus cells under the microscope.

The Nervous Child and His Management.—Doctor E. Bosworth McCready of Wildwood, Pa., in the *Journal of the A. M. A.* of October 11th., 1919, brings to our attention some very essential facts concerning the nervous child and his management. He tells us that "The well-poised, effective,

emotionally stable adult human being is the exception rather than the rule in modern life. The neuroses and psychoses are seldom of sudden onset, but are usually the end result of a long series of contributing factors, which have their inception in early life and are recognizable in early life by the conscientious and careful observer. While some children are born nervous (hereditary causes), some acquire nervousness (disease, habits, etc.) and others have nervousness thrust upon them (faulty training at home and at school). To counteract and to remove these causes in their various and combined phases is the duty (and the privilege) of the physician, and if he fails in its exercise he is derelict." He states further that "The proper development of the nervous system is dependent on proper metabolic functioning, and anything that interferes with this—improper or insufficient food, acute or chronic disease, fatigue, physical and emotional, including that from reflex irritation—all lay the foundation for future trouble. Donaldson says, 'The important events in the postnatal growth of the nervous system occur early in life, and this in turn emphasizes the paramount importance of favorable conditions during the first three years of childhood.'

"The danger signs are many, and while not all are of equal import, none should be disregarded. In early infancy they are digestive disturbances, fretfulness, extreme sensitiveness to light and sound, convulsions, premature or late closing of fontanels, premature or late dentition, precocity or delay in the development of muscular control, in talking, undue sensitiveness of skin and mucous membranes, thumb sucking, head rocking, thigh friction, and manipulation of genitalia. In early childhood they are constipation, perhaps alternating with diarrhea, anorexia, and perversities of appetite, aversion to particular kinds of food, night terrors, muscular twitchings, tics and muscular incoordinations, stammering, lisping, idioglossia, enuresis, tremors of the fingers on extension, restlessness, irritability, perversity sometimes amounting to negativism, phobias, extreme timidity, fatigability, hypermotivity, etc.

"Treatment should begin as early in life as possible, even in the prenatal period, employing every means at our hand to allow Nature every opportunity for beneficent activity. Nature, in the form of hereditary tendencies we cannot affect: we can only influence her results through Nurture."

"Thus," he says, "the treatment of the nervous child must begin with a modification of the immediate environment. If the child remains in his home, his regimen should be under the absolute charge of the attending physician; otherwise treatment is futile. Domestic arrangements must be modified and changed as conditions require, sources of friction must be removed, impatience, irritability and undue sympathy on the part of various members of the household must be curbed. The first consideration should be to see that the child obtains sufficient rest. Fatigue in children brings about a nervous irritability which leads to further effort, giving the false impression that the child is unusually energetic.

"Equaling the importance of the prevention of over-fatigue is the regulation of the diet. We are accustomed to think of malnutrition as affecting only those of narrow means; yet a large percentage of children from well-to-do homes are under-nourished. Fresh air, bathing, regulated exercise, all have an important place in the hygienic management of the nervous child."

McCready lays particular stress upon the fact that "There is nothing

so conducive to nervous stabilization as well-conducted country life" and that "The child, to gain the best results, must return to a fairly primitive mode of life; and though not, perhaps, obeying to the letter the mandate 'Study Nature, not books,' must 'Study Nature, then books!'"

DERMATOLOGY.

Conducted by Ralph Bernstein, M. D.

Atrophia Maculosa Varioliformis Cutis.—M. L. Heidingsfeld describes a rather unusual case of atrophy of the skin of the cheeks presenting every appearance of the scars of variola. The lesions were generally round or irregularly round in outline, it being difficult to differentiate them from the pit marks of an old, healed variola. A small number of the lesions were definitely kidney shaped, while quite a few were linear, having rectangular rather than tapering extremities. They were a fraction of a centimeter in length and were arranged more or less parallel to each other, practically following the general lines of cutaneous development. The atrophy was shallow and the border was sharply defined. There was absence of pigmentary change in the lesions, and except for the atrophic change, conserved for themselves the general character and appearance of the normal skin. A few of the lesions, scattered here and there, showed, upon close inspection, a very faint central furfuraceous desquamation. There were also to be seen, upon close inspection, a few faint rose red, pin-head sized points which, according to the patient, were incipient lesions. No local or predisposing cause for the atrophic change could be discovered. The skin on the face, scalp and body of the patient was unusually clear; there were no comedones or papules on any part of the body; the scalp was normal; no traces were to be found of an acne varioliformis, lichen planus or hypertrophicus, syphilis, scleroderma, morphea, or any other form of dermatosis that could predispose atrophic changes. Heidingsfeld has never encountered a case of similar character and is unable to find its analogue in the dermatologic literature.—*Jour. Cut. Dis.*

Xanthoma Tuberosum Multiplex.—Anstruther Davidson reports the case of a woman 45 years of age suffering with this disease in which unusually large and numerous lesions were exhibited. The lesions had been in process of evolution over a period of ten years. Two large tubercles were present on the left hand and there were a few on the right hand. On the palmar surfaces the flattened yellow masses were formed in a continuous band, approximately finger width on the fifth and forefinger and on the bases of their metacarpals. In the flexures of the digits the lipoid material had been moulded into raised cross ridges by pressure. The tubercles on the extensor surfaces of the feet were similar to those on the hands, but due to the pressure of the shoes were somewhat flatter. Their most striking feature was the symmetry of their shape and distribution. On the extensor surfaces of both feet the middle joints of the fourth and fifth toes had large single tubercles like those on the hands. The inner and inferior surfaces of both big toes, the tips of the third and fourth toes on the right, and the tip of the little toe on the left were likewise affected. One large nodule about the size of half a walnut was located at the insertion of the tendon of Achilles on the right. The tubercles on the soles looked somewhat like ordinary calluses with yellowish centers. On the

knees were nodular and papular forms, ten above the right patella, five above the left patella and three below. Over the elbows the tubercles had coalesced into a mass.—*Calif. State Jour. Med.*

Extensive Cutaneous Atrophy of the Legs.—As a rule, atrophy of the skin is secondary to some inflammatory process. Audry and Azemar reported an unusual case which suggests that in some cases the atrophy may be primary. Their patient was a woman 68 years of age who, when she was 42 years old, noticed the development of atrophy over the lumbar regions. This gradually extended symmetrically until, when she came under observation, it involved the entire legs and thighs. The free border presented a sharp demarkation which was more or less erythematous. Nothing could be determined concerning the etiology, and the authors were unable to offer any suggestions.—*Ann. de la derm. et syph.*

Circumscribed Areas of Fatty Atrophy.—Gilchrist and Ketron in 1916 reported a case of atrophy of the fatty layer of the skin preceded by the ingestion of the fat by large phagocytic cells. A case presenting similar features is reported by John Sundwall. The patient was a young woman 19 years of age who was suffering from chlorosis and who had noticed that the circumference of her left thigh had decreased. Her physician's prognosis of muscular atrophy caused her great worry, so that a further examination was made, disclosing the fact that the muscles of the left limb were as strong and well developed as those of the right. Two areas of atrophy were present, however, on the left thigh and leg. The larger of the two was triangular in shape and occupied almost the entire area of Scarpa's triangle, being most pronounced over the rectus femoris muscle. The skin in this area had a bluish tint caused by dilated veins. On close examination, slight pit like depressions of irregular shapes were seen. Otherwise the skin appeared normal except for a small, slightly reddish patch somewhat circinate in shape and covered with fine scales. This patch resembled ringworm and responded to local treatment for such a condition. The skin was soft and elastic and could be pinched between the fingers. The subcutaneous strands of connective tissue could be felt upon rubbing, and were most prominent over the rectus muscle. The second area of atrophy was on the anterior surface of the leg and was not so pronounced as that in the Scarpa triangle. It measured approximately 15 cm. long and about 10 cm. wide, and was without definite boundary as the margin gradually faded into normal skin. No abnormal changes were found in any other part of the leg or thigh. Upon microscopic examination the epidermis was found to be normal in structure and staining characteristics except the corneum which was more scaly than usual. The various other strata were normal in appearance. This case differed from that reported by Gilchrist and Ketron in many respects. In the latter case many atrophic dimples were present over the greater portion of the legs, producing a distorted contour. The case here described was unilateral. Only Scarpa's triangle and an area over the anterior surface of the tibia were involved. The atrophy was equal and diffuse in these two areas and not characterized by deep cuplike depressions. No clinical history indicated a chronic inflammatory condition, whereas such a history was given in the case reported by Gilchrist and Ketron. In Sundwall's case no cellular infiltrations or macrophages were found; in fact, the section was characterized by almost complete absence of any nuclear elements. Only sclerotic tissue

was present. No evidences of an inflammatory character were seen, and the indications were that the atrophy had occurred simultaneously throughout the areas involved, and that no inflammatory process was concerned in the production of it. The dilated vein in Scarpa's triangle indicated that there was some obstruction to the venous system of this limb.—*Journ. Cut. Dis.*

Cutaneous Tuberculosis Following Tattooing.—The case of an artillery officer 29 years old, having no previous history of tuberculosis that was in any way definite, is reported by Dore and is of interest.

The operation of tattooing the picture of a flying drake on the patient's right forearm, and a fox's head on the left forearm, had been successfully performed five years prior to the patient's coming under observation for cutaneous tuberculosis, and the operation was not followed by any excessive inflammation or subsequent trouble.

Three years after the first operation the patient had the design touched up by the same operator. Twenty-two months after this retouching was done a small swelling was noticed on the tattoo mark on the right arm in the location of the drake's back. In a few days this swelling was followed by the appearance of numerous and very small raised spots on the wings and body of the drake and on the fox's tongue and ears on the left arm.

When the case first came under observation the lesions presented a raised plaque with well defined edges and a flattened and slightly ulcerating surface approximately one inch long by twelve inches in width on the right tattoo mark in the position of the drake's back, while there were about a dozen small conical papules on the wings and body. There were as well on the left tattoo mark papules of similar characteristics on the tip of the fox's tongue and at the points of the ears. These papules varied in size from pinhead to small pea, and some of the larger ones showed a slight central depression resembling a papuloneucrotic tuberculide. All of the lesions were confined within the area that was tattooed, and according to the patient's statement corresponded to the points which had been retouched. A chain of enlarged glands was found in the right axilla. X-ray was the treatment selected for the condition with excision as an alternative. A Sabouraud pastille dose was given to the areas affected on both arms. In a few days the placque on the right arm broke down into an ulcer having every appearance of a tuberculous lesion. Excision and grafting of the ulcer followed and satisfactory healing took place. The eruption of papules still remained unchanged so a second pastille dose was given two months later to both areas, taking in the area which had been grafted. A month later the patient was seen again. There was still pigmentation of the exposed area on the right arm, and the papules were flatter and smaller, but none had disappeared. The left arm showed an increase in the number of papules. Two more treatments were given which caused the disappearance of many of the papules, leaving slight atrophy of the skin, and after a further exposure the condition cleared up with the exception of a few minute shiny atrophic macules. Treatment was then discontinued. There are three points of particular interest in this case. First, the rarity of tattooing as a source of infection in cutaneous tuberculosis; second, the length of the incubation period if we take it for granted that the tattooing was the cause of the infection; third, the simultaneous occurrence of a tuberculous ulcer and an eruption of necrotic papules confined to the area of the designs.—*Brit. Jour. Derm. and Syph.*

Folliculitis Ulerythematosa Reticulata.—A somewhat new and interesting dermatosis presents itself under the above name. A case was demonstrated by Whitehouse in 1913 before the New York Dermatological Society, and McKee and Parounagian have observed two cases which were so similar in all respects that a description of one will suffice for both.

The patient was a girl sixteen years old and the disease was first noticed on her cheeks when she was eight years of age. At approximately the same time comedones, erythema and pitted scars were also noticed, which developed first being impossible of determination. At no time were there any pustules, vesicles or papules. Over a period of twelve months or more applications similar to those employed in acne were given the patient. She called attention to the fact that she had never had more than a dozen comedones at one time, and she was of the opinion that some of the scars, if not the larger number of them, appeared with antecedent comedones.

The eruption was quite slow but steady, and was limited to the greater portion of both cheeks, being symmetrically distributed. The skin over the remainder of the body and the mucous membranes were normal. The eruption consisted of numerous, closely crowded, small areas of atrophy separated by narrow ridges. The individual atrophic areas were pit-like, about 1 mm. in depth and generally ranged in size from 1.25 to 2 sq. mm., and were irregular in shape. The histology showed a slight atrophic epidermis with a loss of rete pegs. There was inflammation in the derma which was manifested by vascular and lymphatic dilatation, congestion, edema, and perivascular and perifollicular infiltration of small round cells. Under-development of the sebaceous glands was in direct contrast to a marked over-development of the hair follicles. Some of the atrophy appeared to be due to degeneration of collagen. Both cases were studied carefully and they were identical in every respect, which warrants the belief that the disorder is a clinical entity. —*Jour. Cut. Dis.*

Acuminate Papules in Acute Lichen Planus.—To the experienced dermatologist the papule of lichen planus cannot be mistaken. It is a shiny, flat topped papule with usually a slight central depression. It has precipitous sides and an angular base. The violet tint frequently given to the red color of the papules as a group is also characteristic. Sometimes they are aggregated and quite frequently they are itchy. There can be no question that in all cases of lichen planus the papules are really planus or flat topped. The question is, can some of the papules be acuminate; or, at one stage in some cases, may all of the papules be acuminate? Darier says that in some cases of acute or sub-acute lichen planus a few acuminate papules will be found, and Jadassohn states that the acuminate papules are due to the particular lesions having a follicular localization. Montgomery and Culver report the case of a man aged fifty presenting acuminate eruption. The papules are described as being small, uniform in size, prominent, acuminate, discrete and arranged in a distinct and irregular network. The papules were not desquamative, and although they glittered in oblique light, it was not the characteristic waxy or vitreous glitter of lichen planus. On the front of the wrists were to be seen a few red acuminate papules, and on the backs of the hands were some flattened but not characteristic papules. These papules on the backs of the hands looked somewhat like the flattened red seborrhoeic patches that quite frequently arise in this region. Assuming that they were seborrhoeic

patches, they were exceedingly numerous. There were papules on the back of the neck as well at the point where the collar button rested, and at the base of the neck on each side a brown, desquamating streak ran anterio-posteriorly in which there were a few acuminate papules. Itching was not a symptom. The scalp, face and lower extremities presented no lesions, but on the left side of the tongue there was a white, thickened patch approximately 2 by 4 mm., while the cheek pouches were not affected. The lingual patch, the brown desquamating streaks at the base of the neck, and especially the reticulated arrangement of the papules on the back across the shoulders, created a similarity to lichen which aroused suspicion. At the end of the first week the eruption was somewhat better, but was more suggestive of lichen planus that ever. Fifteen days after the first visit there was an irregular group of papules on the left side of the tongue and what appeared to be two small appules on the right border of the tongue. The papulation and lace network in the cheek pouches was not beautifully distinctive of lichen planus, and there were a few lichen planus papules on the glans penis. There were some small papules on the abdomen typical of lichen. In the axilla there were some large, dull red, prominent, rounded papules about 3 mm. in diameter, which itched slightly, and aside from this the patient suffered no irritation whatever. Following this the eruption flattened out into typical lichen papules and finally disappeared, leaving the usual brown stains. Approximately five months from the first observation practically all evidences of the eruption had disappeared.—*Jour. Cut. Dis.*

GYNECOLOGY AND OBSTETRICS.

Conducted by THEO. J. GRAMM, M. D.

THE RELATION OF EXOPHTHALMIC GOITER TO OVARIAN INSUFFICIENCY.—Tilman's studies lead him to prefer the theory ascribing this disease to a disturbance of the glands of internal secretion. The part played by disturbances in the corpus luteum secretion in the genesis of thyroid hypertrophy and exophthalmic goiter has been demonstrated.

The author has recently observed six cases of Basedow's disease in women of the same family. The appearance of the symptoms coincided with the period of ovarian disturbance, chief of which was insufficiency, either partial or total.

The author concludes that Basedow's disease is a dysthyroidism characterized by a change in either the character or quantity of the thyroid secretion. This dysthyroidism is dependent upon a predisposition, some primary alteration either in the thyroid gland itself or its sympathetic system. While the causes of the dysthyroidism are various, we must look especially for toxæmia, acute or chronic infections, or hyper- or hyposecretion of the glands of internal secretion in seeking the causative factor in a particular case.—Abstract *Surg., Gyn. & Obs.*, vol. XXIX, 2—122.

TECHNIQUE FOR BLOODLESS HYSTERECTOMY.—Bertha Van Hoosen (Chicago) has developed a technique for hysterectomy, designed to avoid shock and reduce the percentage of fatalities. It consists in the application of a clamp, horizontally beneath and along the course of the Fallopian tube on each side. While the assistant maintains traction upward upon the uterus, the operator places two other clamps, preferably of the angiotribe pattern,

along each side of the uterus from a point opposite the internal os to the tubal attachment. The forceps are closed slowly enough to allow the uterine musculature to slip to the inner side. By this application of the forceps the uterine artery and anastomotic branch of the uterine and ovarian artery are pushed away from the body of the uterus and the peritoneum covering the uterus is rendered tense and taut. The Fallopian tubes together with the body of the uterus lying toward the inner side of the forceps is then cut away down to the internal os. With dissecting scissors the cervical musculature and mucosa is coned out for any distance, even to the external os if so desired, and lifted out with the attached body of the uterus. Neither the ovarian or uterine artery having been severed, the suturing may be begun. The first suture unites the anterior and posterior border of the cervical cone, and then the cut edge of the broad ligament on each side is sutured with lock stitch; or the V shaped incision may be closed by bringing the two edges together. The cut edge of peritoneum from which the Fallopian tube has been pulled out may be ligated *en masse*, but not including the ovarian artery. The claims for this technique are the preservation of the integrity of the pelvic circulation, the sympathetic nerves are not traumatized and the bladder and ureters are undisturbed. Over 100 cases have demonstrated the advantages of this technique.—*Surg., Gyn. & Obs.*, Vol. XXIX, 198.

Shock.—From an extended abstract of the conclusions of a special com mittee of the Royal Society of Medicine, presented by Bayliss, we may gather some practical suggestions. Bayliss defines traumatic, surgical or secondary shock as a state of collapse associated with low blood pressure which produces a deficient circulation of blood and deprives the tissues of the necessary supply of oxygen.

It has gradually come to be realized that the chief factor in shock is a deficiency in the volume of blood in circulation. It is probable that the blood is held up somewhere in dilated areas of the vascular system, and by a process of exclusion it is assumed that the region in question is the capillaries. By experimentation it has been found that injury of large masses of muscular tissue is especially liable to produce shock. Some chemical product of the injured tissue seems to be the responsible agent. A base, histamine, has been shown to possess the remarkable effect of powerfully dilating the capillaries but not the arterioles, and in large doses produces a condition of profound shock. A substance of this kind is believed to be produced in injured and disintegrating tissues and is augmented by any cause tending to depress the circulation, such as cold, anxiety, fatigue, thirst, and hemorrhage. Dale believes the most probable cause of shock is the presence of a toxin with an action analogous to that of histamine. Products of this type have been extracted from almost all of the organs of the body. They abound in the small intestines and are set free from any tissue when injured or even from an arrest of the circulation. . . . Malcolm believes, whatever the cause, the vascular changes characteristic of shock are brought about reflexly through the nervous system. The simplest and most complete explanation of uncomplicated surgical shock is found in the view that its primary change is a reflex contraction of the blood vessels proportionate to the intensity of irritation of the sensory nerves. . . . The bloodless condition of the skin does not interfere with the action of the sweat glands which secrete profusely, as has been experimentally demonstrated. The starvation of tissue is also a sufficient cause of the acidosis of shock, this being a result and not a cause.

Walker discussed the treatment of shock in civil practice. Whether the patient be affected with shock or hemorrhage, the blood volume drops, and the treatment should consist in keeping up the fluid reserve by transfusion and the injection of a liter of saline with 2 per cent. of sodium bicarbonate. Continuous rectal saline should also be given and as much fluid as possible by mouth. Oxygen for half an hour also brings the blood pressure back to normal. . . . The shock seen in the operating room is best treated by morphia, pituitary extract, rest, warmth and the administration of fluids. Toxic shock as after burns and infections, being a toxæmia, is best treated by flooding the tissues with fluids.—Abstract *Surg., Gyn. & Obs.*, Vol. XXIX, 19.

The Treatment of Cervicitis.—Hollender and Gratiot recommend the introduction of one drachm of Beck's bismuth paste into the cervical canal by means of a syringe. Two to four injections weekly are said to effect a rapid cure. In reading such a recommendation one should not forget the well known dangers of introducing anything at all beyond the internal os, especially in office treatment.—Abstr. *Surg., Gyn. & Obs.*, Vol. XXIX, 118.

UROLOGY.

Conducted by Leon T. Ashcraft, M. D.

The Differential Diagnosis Between Appendicitis and Ureteral Calculus.—Paul Eisen (*Urol. and Cut. Rev.*, Oct., 1919) states that at the North Chicago Hospital it is the custom in all doubtful cases of appendicitis with co-existing urinary symptoms, provided that the case will admit of this delay, to make a thorough X-ray examination—first of the urinary tract; and, if no positive findings are obtained, then of the digestive tract also. From the varying locations of the pain in appendicitis, one may infer how unreliable this diagnostic sign is. In making our diagnosis of appendicitis and in differentiating it from ureteral stone, an X-ray examination is, therefore, of the greatest value. The author believes that stones in the kidney, ureter or bladder can be seen in the roentgenogram in a larger percentage of cases than is commonly stated; and that a large number of cases showing no stone shadow will be found, on further examination, to be appendicitis, often with other lesions present.

Genito-Urinary Surgery from the Anesthetist's Viewpoint.—R M. Waters (*Urol. and Cut. Rev.*, Oct., 1919) states that genito-urinary surgeons have found more difficulties from the anesthetist's viewpoint than the practitioners of any other branch of surgery except the head specialties. They have been dissatisfied with the success of their associated anesthetists or, more likely, the non-professional anesthetic technicians. The anesthetic difficulties encountered in genito-urinary surgery, the author considers, may be grouped under two heads: first, the over-vigorous young adult males; and second, the debilitated of both sexes. In regard to the former class, the technical difficulties of administering any drug to produce general anesthesia in them are great; and to take the responsibility for such an administration at the same time that one takes the responsibility for a surgical operation is foolhardy. The same may be said in regard to the second group. For the genito-urinary surgeon to assume the responsibility of preoperative preparation, anesthesia technique and after-care in such a case, without help from

an anesthetist, is dangerous to both patient and surgeon. The author feels that the genito-urinary surgeon needs and deserves the help of a trained anesthetist in his more difficult work and has found him keen to use this help.

Nephrectomy for Bilateral Renal Tuberculosis. Results after Three Years.—E. Percarnan (*Rev. exp. de Chirurg.*, 1919, i, 233) reports this as the first operation of the kind performed in Spain. After undoubted evidence of the functional capacity of the left kidney had been secured, the right was removed. Recovery was uneventful, except for a slight and easily controlled uremia on the third day. During the eighth month after the operation, there was a slight cystitis. At the end of the first year, tubercle bacilli and pyuria of renal origin were still present. At the end of two years, however, the urine was not so purulent, and neither dysuria nor polyuria existed. Frequent injections of tuberculin were given, and the patient lived an open-air life. At a recent examination, three years after the operation, the urine was clear, kidney exploration was negative, and the patient's condition was good.

The Bloodless Treatment of Painful or Essential Hematuric Nephritis.—E. F. Lozano (*Rev. exp. de Chirurg.*, 1919, i, 231) claims that the intrarenal pressure in this condition can be decreased by the injection of a concentrated solution of sulphate of soda through the ureteral catheter, the patient being in the Trendelenburg position; the intrarenal secretion, of lesser concentration, interchanging by osmosis with the concentrated solution injected. He thinks that the relief of the congestion will remove the cause of the nerve tension that is present in such cases. So far, he has not employed the method clinically; but animal experimentation has convinced him of its value. He considers it indicated not only in essential hematuria, but also in other hemorrhagic renal conditions. He thinks that the injections are harmless, and may be repeated whenever painful crises occur.

Ruptured Cystic Kidney.—C. W. Sharples (*North-west Med.*, XVIII, 1919, 109) reports the case of a man of thirty, who suddenly developed intense symptoms suggestive of the rupture of an intraperitoneal viscus. An abdominal exploration failed to reveal it, and the wound was closed. The right kidney was opened and drained through a lumbar incision, with the result that the symptoms abated and the patient had an uneventful recovery, except for the development of phlebitis of the left leg. The cyst contained about a pint of fluid. The author attributes the marked symptoms of shock and pain exhibited by the patient to the effect produced on the sympathetic nervous system by the rupture.

Four Cases of Urethral Stricture with Acute Retention of Urine Treated Successfully without External Urethrotomy.—M. Stern (*Internat. Jour. of Surg.*, 1919, xxxii, 180) states that in the first three cases, palliative treatment of the area of stricture gave much better results than could have been expected from external urethrotomy. In the fourth case, in which an external urethrotomy had been performed previously, its ultimate results were shown to be inferior to those of careful palliative treatment. When the infiltration is deep and unyielding, as in the cicatricial variety of stricture, local surgery is indicated. In suitable cases, however, the results of palliative measures are excellent. The usual method employed was to

give drainage through a suprapubic cystotomy wound, followed by warm urethral irrigations and instillations of argyrol solutions into the urethral orifice. The dilating irrigator causes the absorption of strictures, and after a number of days the instillation tube will enter the stricture without difficulty.

The Treatment of Vascular Urethral Caruncula by Chromic Acid.—C. de Rezende (*Brazil med.*, 1919, xxxiii, 84) states that he has observed five cases of this condition since 1915. As he has not found this method of treatment reported, he thinks that it may be new; but as the literature available to him is rather meagre, he is not certain on this point. The treatment consists in making repeated punctures of the tumor with a probe dipped into chromic acid. When the growth has disappeared, he cauterizes the site in the same way, neutralizing any excess of the acid with sodium bicarbonate. A local anesthetic is employed. In the case of one patient, a woman who had suffered for years with the condition, the removal of the growth was accomplished without either hemorrhage or appreciable pain. Her condition has remained good during the two years that have elapsed since the procedure. In a case in which the actual cautery was employed, there was pain for several days afterwards, probably owing to the action of the heat on the surrounding tissues.

The Functional Classification of Cases of Prostatitis and Freyer's Operation.—E. Pirondini (*Policlin.*, Roma, 1919, xxvii, Sez. chir., 113) classifies the cases of prostatitis into three stages. In the first stage, the urine is clear. Unless there are definite changes in the viscera, he thinks that such patients should be operated on in one stage. The two stage procedure should be employed in the case of those with severe secondary infection. In the second class of cases, the anatomical and functional alterations are in part mechanical, and are still reparable. In the third functional stage, the prostatitis is accompanied with prolonged retention, and the principal changes in the kidney are atrophic and sclerous. In such cases, the injury to function is, at the best, only slightly reparable. In most of the cases of the second stage, and in all those of the third, he employs two-step procedure. In cases of the third stage, the improvement in the general state is much greater during the preparatory treatment than is that of the function of the kidney. In these cases, the author has used with success the Freyer operation, done in one sitting.

An Interesting Case of Prostatic Obstruction.—D. Geiringer and J. Campuzano (*Rev. de med. e cirurg. de la Habana*, 1919, xxlv, 136) consider obstruction in the urethral, rather than the vesical part of the internal sphincter, difficult to diagnose. In this class of cases, the obstruction is usually due to hypertrophy of Albarran's glands. They had such a case in a man of sixty-four years. The urethroscope showed an oval-shaped prominence in the floor of the posterior urethra, reaching from the verumontanum to the neck of the bladder. No lateral compression of the urethra was noted. The adenoma was removed by means of a suprapubic operation.

The Status of the Vesical Sphincter after Prostatectomy.—E. M. Watson (*Surg., Gyn. and Obst.*, 1919, xxviii, 569) says that the two things that usually explain unsatisfactory function after this operation are the incomplete removal of the obstruction and extensive trauma to adjoining parts. It is now generally believed that the internal sphincter shows the normal

closing point of the bladder. From a study of the cases reported in his paper, the author concludes that after perineal prostatectomy, the internal or vesical sphincter returns to its normal tone and function in every instance. This takes place within a few weeks. There may be even an earlier return of function. In many cases, the urine is voided at three and four hour intervals at this period through both the urethral and the urethrotomy wound, while during the intervening time the patient is perfectly dry. This shows that the vesical sphincter is functioning normally.

A Case of Atypical Male Sex Ensemble.—A. Stein (*Med. Record*, 1919, xcv, 902) describes a case of pseudohermaphrodism of the male type. The patient was thirty-one years of age, and wished to lead the life of a woman. The general appearance was that of a woman, but examination showed a rudimentary penis, hypospadias and undescended testicle on the left side. There was a descended testicle on the right. There was an absence of internal female genitalia, as well as an absence of the prostate gland. The psychic female-sex attitude of this subject was probably the result of early environment and rearing as a girl. Although sex is partly decided by the anatomical character of the gonad, or sex gland, the development of the psycho-sexual center has an extremely wide scope given to it through education, example and suggestion.

Cancer of the Prostate. A Combined Surgical and Radium Method of Treatment.—R. H. Herbst (*J. A. M. Ass'n*, 1919, lxxii, 1610) has obtained excellent clinical results from embedding radium in the carcinomatous prostate at six different points. He exposes the prostate through a suprapubic incision, and inserts the radium in the prostate through the bladder. Six weeks to two months later, he exposes the prostate perineally, and again places the radium in the gland in a similar way. He reports one case in which this method was followed, the results being all that could be desired.

SURGERY.

Conducted by J. Dean Elliott, M. D.

The Therapeutic Aspect of Blood Transfusion.—Unger describes the relative merits of direct and indirect transfusion, the effects upon the donor, the dosage and indications for transfusion.

His summary is: There is a greater number of reactions following transfusions with citrated blood than with unmodified blood. This is due to alterations in the blood cells. Sodium citrate acting as a harmful foreign substance renders the red cells more fragile and more easily hemolized. This undesirable result is of especial importance in hemolytic diseases.

Transfusion of whole unmodified blood is the procedure of choice when blood is required as a tissue. When it is wanted merely to replenish impoverished circulation with an adequate supply, citrated blood may serve as a substitute.

For the selection of donors a simple and rapid microscopic method is desirable.

Repeated withdrawal of blood for transfusion may produce in the donor an intense secondary anemia with an increase in the leukocyte count. In the illustrative case reported, sixty transfusions were performed within a period of six and one-half years, with the removal of fifty liters of blood.

The onset of hypertransfusion is evidenced by the patient giving vent to short, sharp coughs. This signal has been of decided value as a warning of impending danger. The giving of more than about 200 c.c. of blood after the occurrence of "the signal cough" may prove fatal.

Transfusion yields moderately good results in infectious and debilitating conditions. The best results are obtained in toxemias, in shock, in cases of hemorrhage, and in diseases of blood, in which it is frequently of life saving value.—*Journal of the A. M. A.*, Sept. 13, 1919.

A New Adhesive Material for Traction.—Cunningham mentions the disadvantages of Sinclair's glue and proposes the use of a 5 to 10 per cent. solution of celluloid in acetone as a substitute. After carefully observing twenty-five applications of this solution, he believes that the scope of traction is increased by its use. It is easily prepared by placing the required amount of celluloid scraps and acetone in a dry, clean, wide-mouth bottle and well stoppering it. The bottle should be shaken at intervals and the solution is ready for use in twenty-four to forty-eight hours. Acetone is volatile and combustible, so it should be kept tightly closed and never heated.

His conclusions are:

1. From 5 to 10 per cent. of celluloid in acetone makes an excellent adhesive material.
2. Its rapidly volatilizing quality permits of its immediate use.
3. In high concentration it can be used when only small areas of skin are available.
4. It is insoluble in water; hence, it is not affected by perspiration or climatic changes.
5. Solutions which are likely to increase desquamation should not be used prior to the application of adhesive material.
6. The natural process of exfoliation of the epidermis limits the effectiveness of one application to about three weeks; on the plantar surface of the foot, over four weeks.—*Journal A. M. A.*, Sept. 27, 1919.

Trendelenburg Anesthesia in Surgery of the Pelvis.—As trauma to the small intestines is one of the most important causes of post-operative shock and ileus, Guthrie is convinced that all patients should be anesthetized in the Trendelenburg position for pelvic operations.

He states that, if a patient has not strained or coughed while going to sleep, it is usual to find only a coil or two of small intestine in the pelvis, provided, of course, the intestine is not adherent to the pelvic structures. Through a small incision in the peritoneum, two fingers are inserted into the cavity and the abdominal wall well lifted up. The rushing air will cause any coils of intestine which have not gravitated out of the pelvis to slide upward, so that it is usually necessary to employ only one small gauze square to get excellent exposure.

In comparing this method with the one usually employed, that of anesthetizing the patient in the dorsal position, making the incision and then calling for the Trendelenburg position, it is amazing to see the difference in the amount of gauze packing necessary to use to obtain exposure.—*Journal of the A. M. A.*, Aug. 9, 1919.

The Surgical Treatment of Exophthalmic and Thyrotoxic Goiter with Special Reference to Bilateral Resection.—In an article upon

this subject MacLean states that he believes the most successful operation, when both lobes are involved, is a bilateral resection and that there is more danger of allowing too much thyroid tissue to remain than in too free removal. Research work in the University of Minnesota has shown that it is necessary to leave one-sixth of the normal gland in adult animals and one-third in growing animals, but, clinically, patients with exophthalmic goiter seem to do well when very little of the gland remains.

A transverse incision, 2.5 or 3 inches long, and a finger's breadth above the sternum, is used. One lateral lobe is freed by blunt dissection; or with the finger, and lifted into view. The superior thyroid vessels are divided where they enter the upper pole and the lobe can then be pulled forward and the large vessels clamped as they cross the capsule in an anteroposterior direction. These clamps are applied just posterior to the line where the section of the lobe is to be made, and necessarily one has in mind when applying them the amount of gland to be left for the purposes of thyroid function. When all vessels in the capsule have been clamped in this manner, that part of the lobe in front of the clamps is removed with the knife, leaving the posterior part of the capsule and a small portion of the gland in front of it.

The isthmus may be divided or left continuous with the detached portion of the lobe and the opposite lobe dealt with in a similar manner to the first. One or two small branches of the inferior thyroid artery in the substance of the gland may have to be ligated, but it is remarkable how little bleeding there is from the actual gland substance when all the vessels in the capsule have been carefully caught before section is made. Should oozing continue after all clamped points have been tied, the divided edges of the capsule may be sewn from side to side over the raw surface. Ligation of the inferior thyroid is to be avoided so that circulation to the remaining thyroid and the parathyroids will be preserved, and there will be no danger of injury to the recurrent laryngeal nerve.

The advantages of bilateral resection over unilateral lobectomy or unilateral lobectomy with resection of the opposite lobe are:

1. Minimum injury to the parathyroids.

2. Absolute safety for the recurrent laryngeal nerve.

3. If for any reason further removal of the gland should be indicated, such as for recrudescence of symptoms of thyrotoxic activity, or the rare but possible occurrence of malignancy, one side could be completely removed with the assurance that some part of the gland remained.

4. It is a physiologic fact that where there are paired organs, should one be removed the other will hypertrophy. This, while desirable in a condition where one is normal, is what we wish to avoid in the case under discussion, and this end is best obtained by double resection.

5. Finally, for cosmetic purposes, in the operation of lobectomy there is a well marked depression on the side from which the lobe has been removed, and on the other side the portion of the gland left produces an undue prominence, while in bilateral resection the neck is obviously symmetrical.—*Surgery, Gynecology and Obstetrics*, November, 1919.

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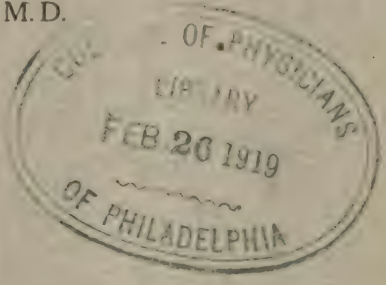
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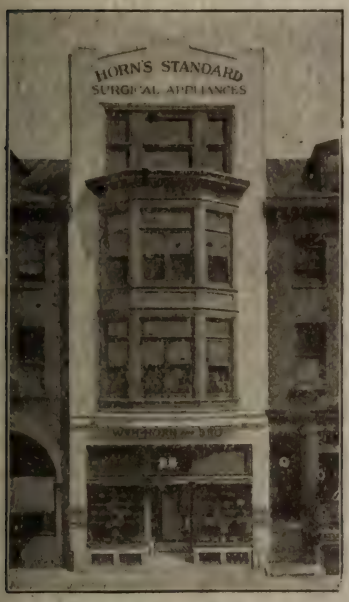
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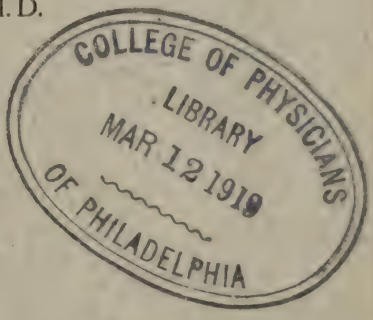
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VOL. LIV FEBRUARY, 1919 No. 2

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Editorial Committee:
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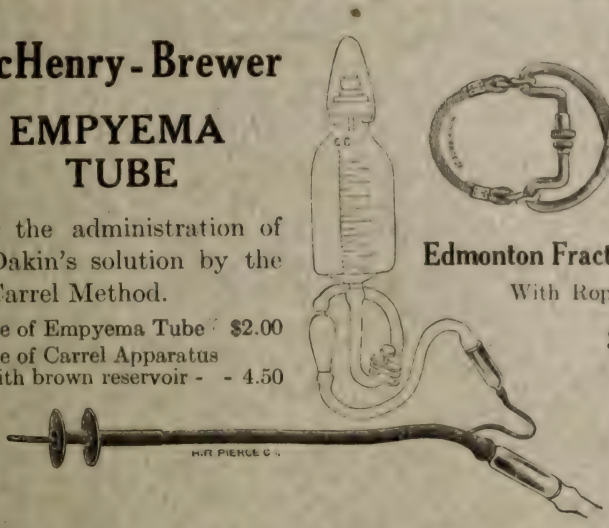


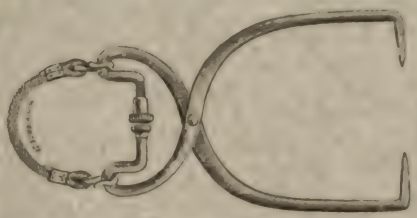
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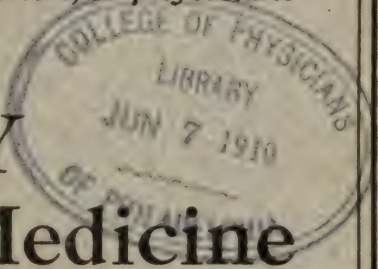
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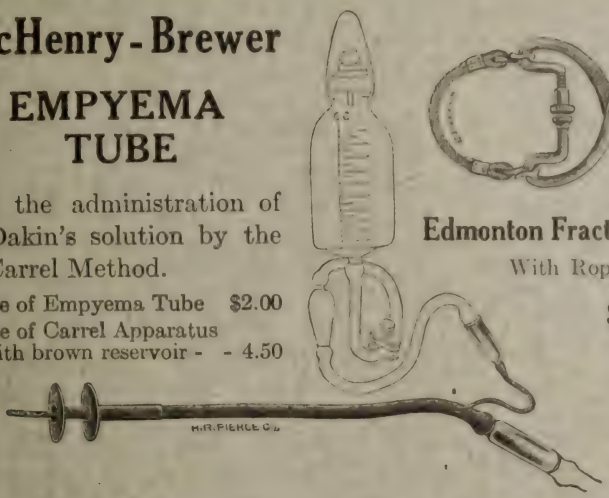


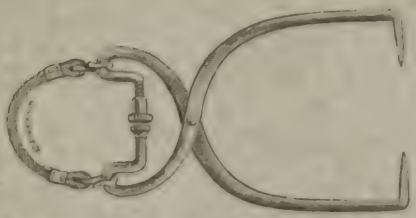
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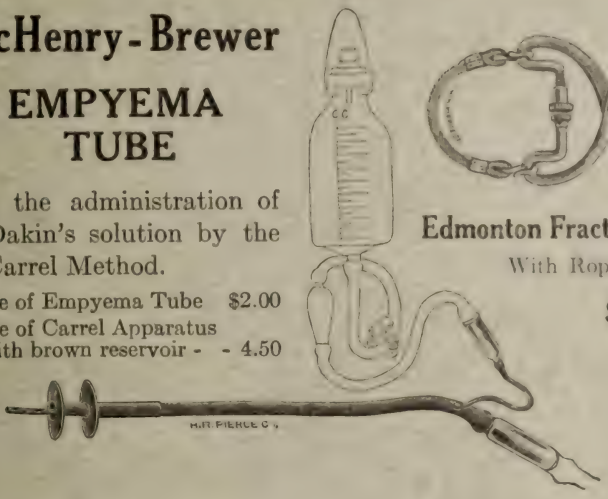


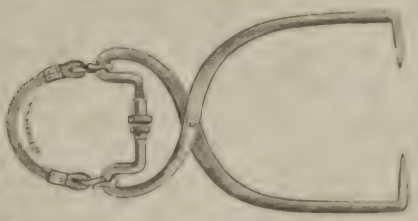
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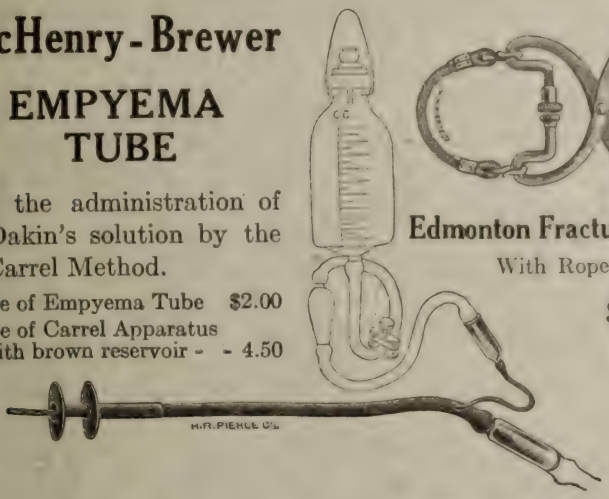
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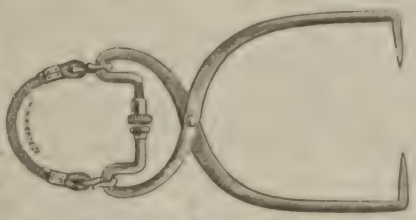
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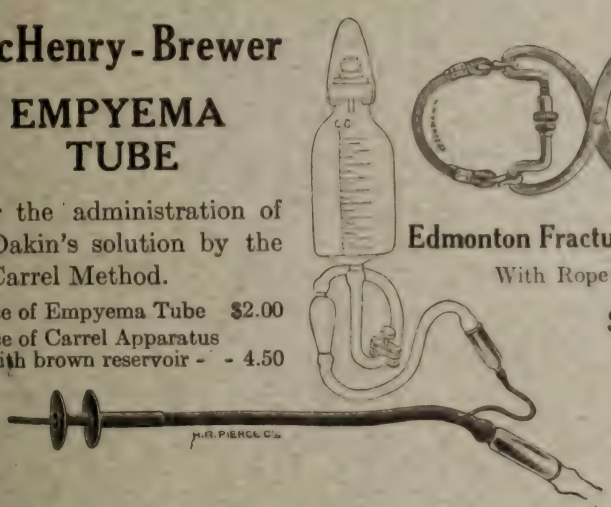
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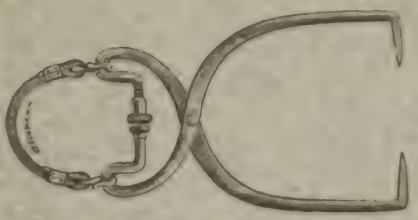
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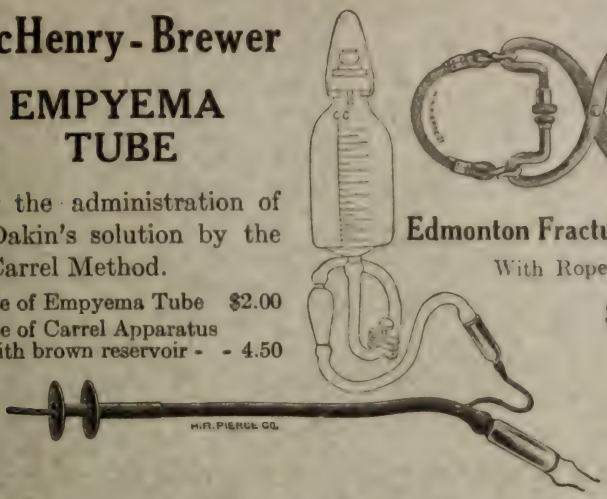
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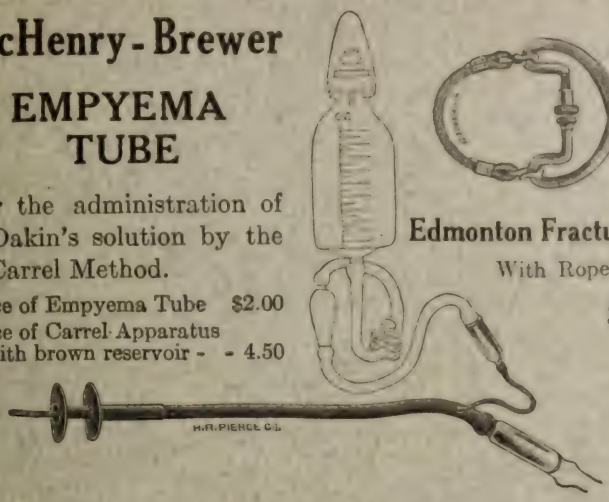
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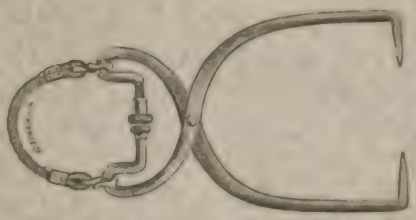
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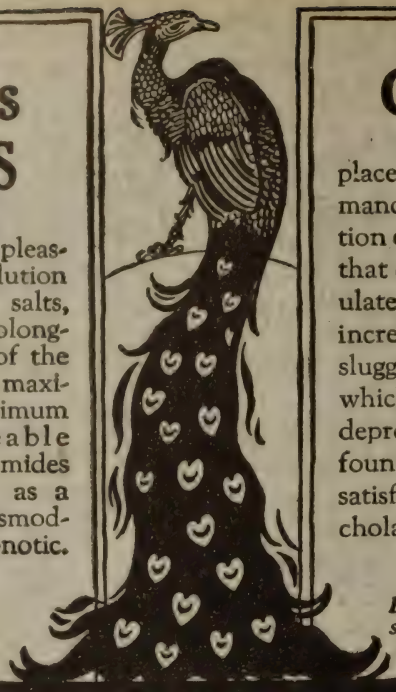
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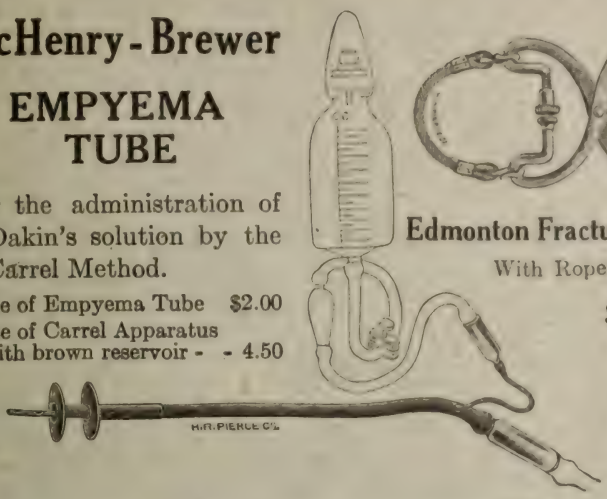
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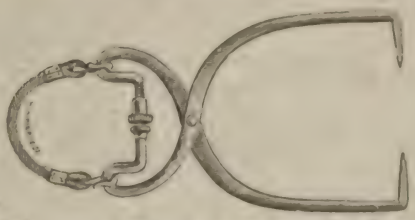
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